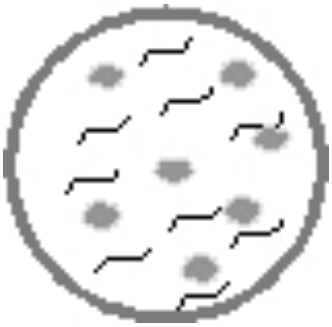
Non-routine Problems

1. Three people are sharing a pizza. Sara wants 1/4 of it and Pat wants 1/3 of it. What fraction of the pizza is left for Wan? Who gets the most pizza? Why?



- - - -

3. One day the Lugnut Car factory produced 315 cars. The cars were silver, black or white. One-ninth of all the cars were silver. For every three black cars made, two were white. How many of each color did they produce?

- - - -

5. An artist has a set of white tiles forming a rectangle twelve tiles across and eight tiles high. She wants to insert down the middle a strip of red tiles that is two tiles wide and a strip of red tiles across the middle that is three tiles high. How many tiles will she need to put in? Show two different ways of finding how many.

- - - -

7. Fatima asked 50 fifth grade students to name their favorite color. 30 picked red. She also asked 80 eighth grade students and 50 of them picked red. Which group liked red best? Explain your reasoning.

- -

8. You can buy 12 tickets for the park for $15.00
or
20 tickets for $23.00. Which is a better buy?

Copyright © 2002 Mathematics Learning

9. Paul's swimming pool is in the shape of a rectangle, 19 feet long and 13 feet wide. There is a 2 foot wide walkway around the pool. A fence is build around the walkway. What is the length of fence needed?

- -

10. Chan's photo lab has some stools with 3 legs and some chairs with 4 legs. There are more chairs than stools. If there is a total of 26 legs on the stools and chairs, how many stools are in Chan's lab?

Copyright © 2002 Mathematics Learning

11. Kelly completed a survey of 100 students for the school newspaper. 71 said they liked rock music, 52 said they liked country music and 30 said they liked both. How many students did not say they liked either?

- -

12. The dimensions of a Greek Temple are 48 meters by 32 meters. It is in the shape of a rectangle. Eight meters from the walls, is a row of pillars. If the pillars are eight meters apart how many are there?

Copyright © 2002 Mathematics Learning

13. We needed 138 balloons to decorate the gym for a class party. We had five bags of balloons. They all held the same number of balloons. We found we needed 18 more balloons to finish the job. How many balloons were in each bag?

- - - -

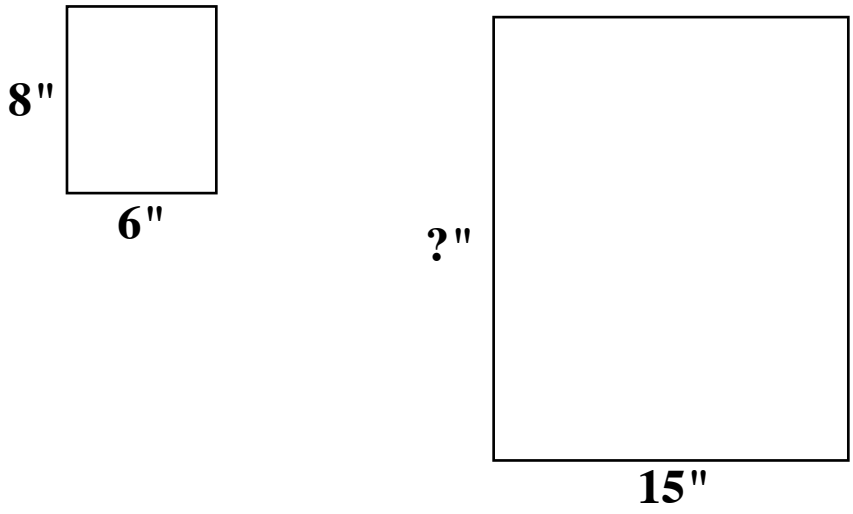
15. At Pizza Hut, 14 girls equally shared 6 large pizzas and 6 boys equally shared 2 large pizzas. Who gets to eat more pizza, a girl or a boy?

- - - -

17. A rectangular box holds 36 cubes. When she opened the box, Marcia could see 12 on the top. If she could open it at an end, how many cubes would she see?

- - - -

19. A 6 inch by 8 inch photograph is to be enlarged so that the base which was 6 is now 15 inches. How high will the enlarged photograph be?

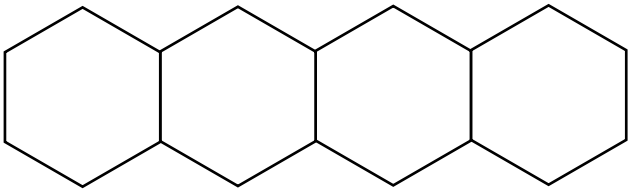


- - - -

21. Paula's swimming pool is in the shape of a rectangle, 32 feet long and 23 feet wide. There is a 3 feet wide walkway around the pool. A fence is build around the walkway. What is the length of fence needed?

- - - -

23. Some hexagons are put together in a row as shown below. Each side of a hexagon is 7 cm long. If the row has 43 hexagons, what is the distance around the row? 2,349 hexagons? n hexagons?



---

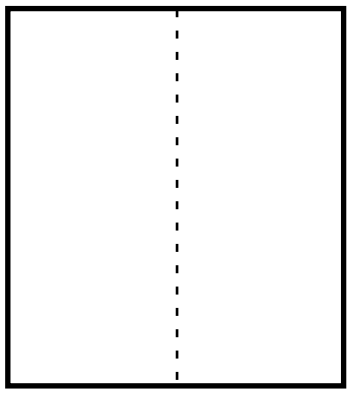
24. A museum is holding a contest to see exactly how many different ways four identical baseball cards can be put together on the wall as a unit (same side up). The rules also state that the cards
a. must lie flat,
b. not overlap,
c. all four cards must have top edge up, and
d. each card must have an edge in common with another card.
In how many different ways can this be done?

Copyright © 2002 Mathematics Learning

25. Tashana has 16 coins that total to $1.85. She has only nickels, dimes and quarters. How many of each coin could she have?

- -

26. A square piece of paper is folded in half to form a rectangle with a perimeter of 12 cm. What is the area of the original square?



Copyright © 2002 Mathematics Learning

27. A 12 ounce can of soda cost 42 cents. How much would a 16 ounce can cost at the same cost per ounce?

- - - -

29. Twenty-eight slices of pizza cost $12. How much would 70 slices cost?

- -

30. The sales manager for Chicken Shack Restaurants is studying the sales figures of two new varieties of chicken sandwiches recently introduced at eight of its restaurants. For four weeks, the three restaurants have been selling lemon-roasted-chicken sandwiches, and for three weeks, the other five restaurants have been selling barbecued-chicken sandwiches. During this testing period, 6000 l-r-c sandwiches were sold, and 7200 b-c sandwiches were sold. Which of the two new chicken sandwiches should the sales manager report as having the better sales?

Copyright © 2002 Mathematics Learning

31. Mr. Barnes built a fence around his square chicken yard. He used 24 post and placed then 10 feet apart. What is the area of the space enclosed?

- - - -

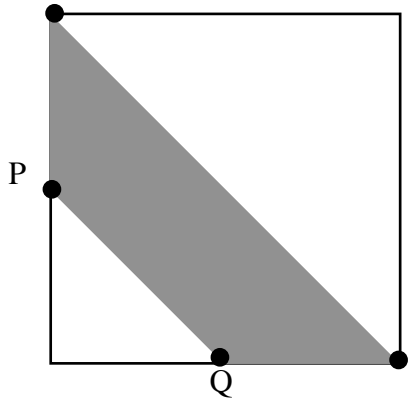
33. How much would 1.37 pounds of cheese cost at $2.85 per pound?

- -

34. A floor, 9 feet by 12 feet, is to be tiled with 4 inch by 6 inch tiles. How many tiles are needed to cover the floor?

Copyright © 2002 Mathematics Learning

35. What fraction of the square shown below is shaded? Points P and Q are midway along their sides.



- - - -

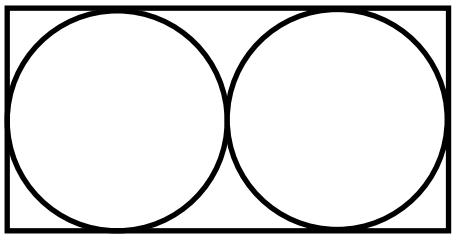
37. A pizza in the shape of a rectangle is to serve 18 people. Everyone is to get the same amount of pizza. If the pizza is 30 inches by 12 inches, describe the piece each person will get.

- -

38, One day while I was at school, the electricity went out at home. When I left for school that morning, all the clocks were working and agreed that the time was 6:30. When I got home they all showed different times. The wind-up clock, which was unaffected by the outage, read 5:21. The analog electric clock stops running when you unplug it from the wall and it starts up where it left off when you plug it back in. That clock showed 3:50. My digital electric clock, which resets itself to midnight electricity goes out and starts when the electricity comes back on, flashes until you correct the time. It was flashing 6:03 am. Assuming the electricity went out just once, what time did it go out and how long was it off?

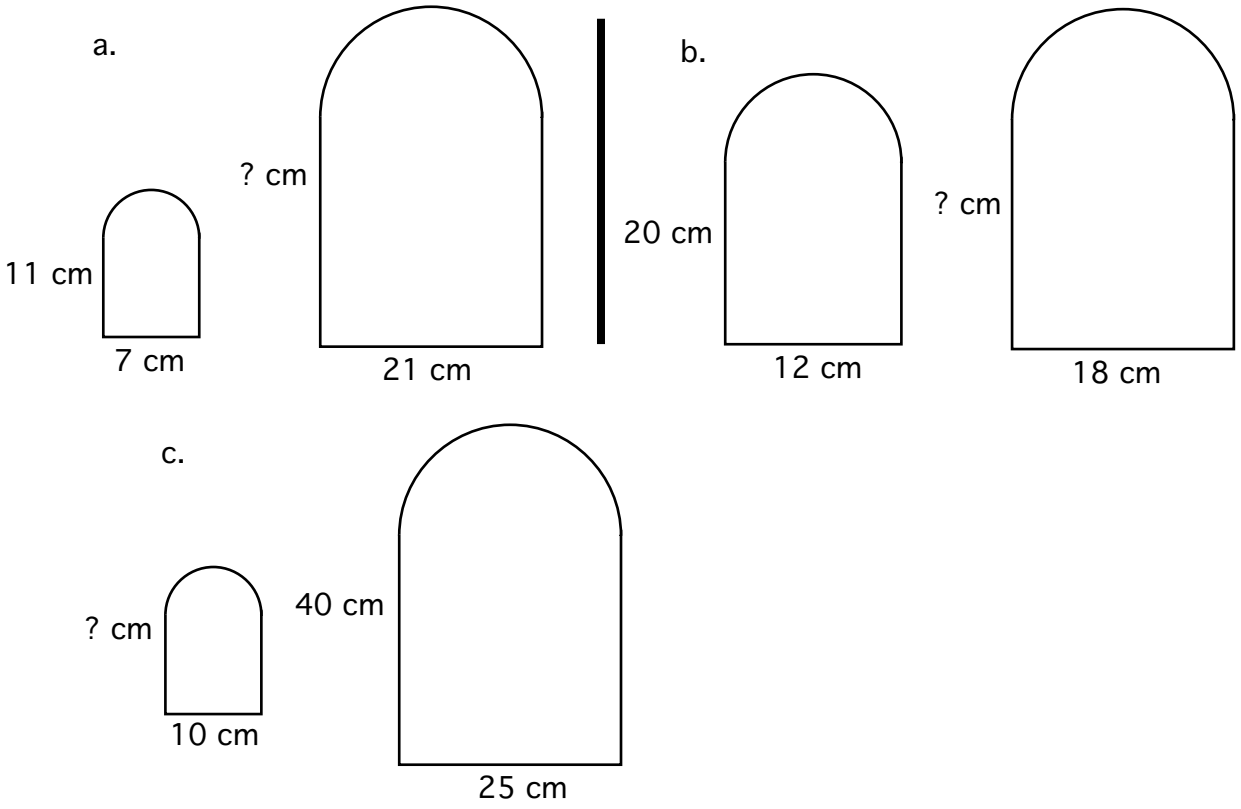
Copyright © 2002 Mathematics Learning

39. Two circles just touch a rectangle and each other as shown in the figure below. The area of the rectangle is 18 square cm. What is the radius of each circle?



- - - -

41. The figures below are similar, that is, one has just been made larger. Find the missing lengths.

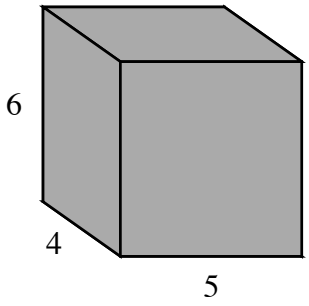


- - - -

43. Venessa is playing a game where low score wins. After playing a number of games, she scores a 139 which lowers her score from 157 to 156. What must she score on the next round to lower her score to 155?

- - - -

45. Marta made a stack of cubes 5 cubes across the front, 4 cubes deep and 6 cubes high. The top and the four sides of the stack are painted red. How many cubes have paint on them? How many cubes do not have paint on them?

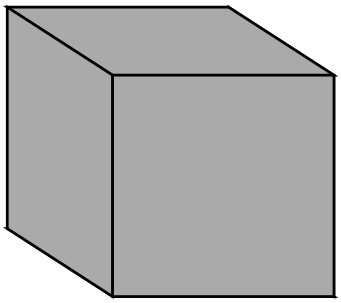


- -

46. One year Maria and Sonia send greeting cards. Altogether they send 56 cards. Maria sends 14 more cards than Sonia. How many cards does each girl send? Explain your reasoning.

Copyright © 2002 Mathematics Learning

47. A large cube made of 125 one centimeter cubes is placed on the floor and paint is poured down over the top and all sides. How many one centimeter cubes have paint on them?



- - - -

49. The sum of five different positive whole numbers is 65. The median of the three numbers is 16. What is the largest any of the five numbers could be?

- - - -

51. A long table for a party is made by putting square tables together that seat one person on a side. There are two rows of small tables used. This table seats 38 persons. How many small tables were used?

- -

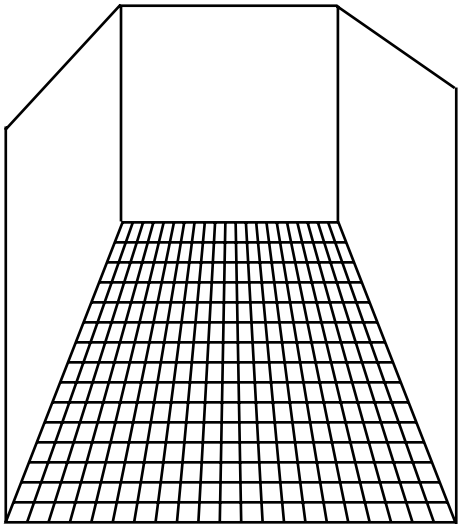
52. Wanda Fish is planning a rectangular swimming pool and plans to use square tiles to cover the bottom. She will use white tiles to form a rectangle in the middle and then make a uniform border of blue tiles. After the tiles have been delivered, she decides to put the blue tiles in the middle and use the white tiles for the border. As it so happens, the number of tiles was such that this was possible but the rectangle did not necessarily have the same dimensions. What is the smallest number of tiles that could have been delivered?

Copyright © 2002 Mathematics Learning

53. Four women must cross a bridge over a deep ravine in enemy territory in the middle of the night. The treacherous bridge will hold only two women at a time and it is necessary to carry a lantern while crossing. (persons must stay together while going across). One of the women requires 5 minutes to cross, one takes 10 minutes, a third requires 20 minutes and the slowest requires 25 minutes (each of them can walk slower if necessary but no faster). Unfortunately, they have only one lantern among them. How can they make the crossing if they have only 60 minutes before the bridge is destroyed? No tricks!

- - - -

55. A square hall is covered with square tiles. When the number of tiles on two diagonals are counted, the number of tiles is 125. How many tiles are there on the floor?

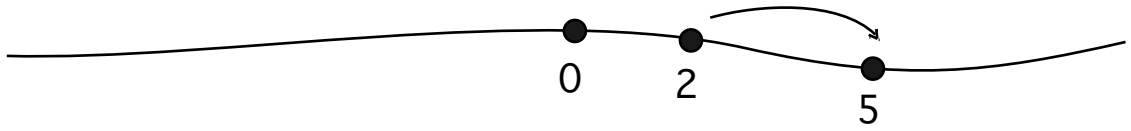


- - - -

Adding and Subtracting Integers # 1

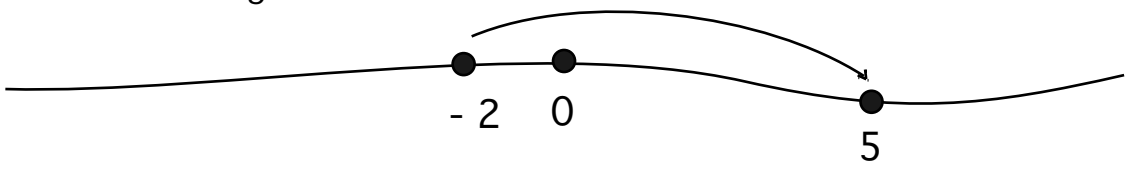
1. 5 - 2 = n ⟶ 2 + n = 5 **n = ___**

What added to 2 gives 5?

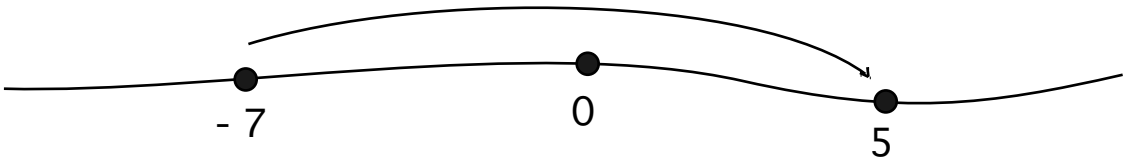


2. 5 - (- 2) = n ⟶ - 2 + n = 5 **n = ___**

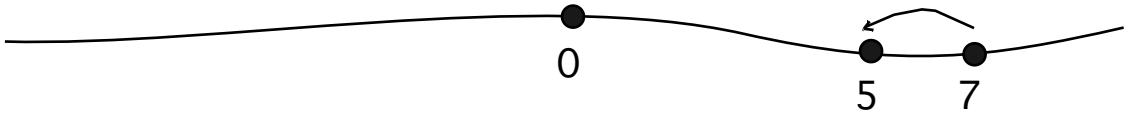
What added to -2 gives 5?



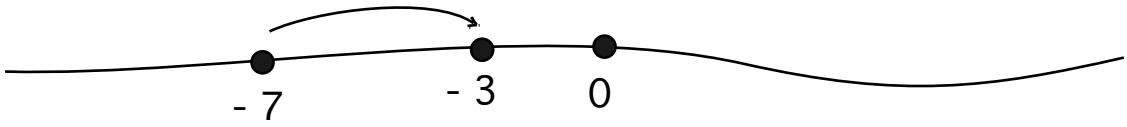
3. 5 - (- 7) = n ⟶ - 7 + n = 5 **n = ___**



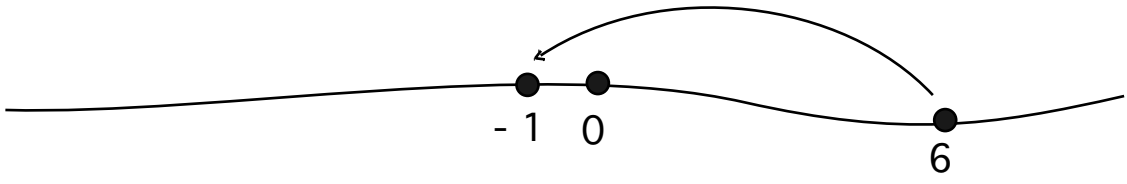
4. 5 - 7 = n ⟶ 7 + n = 5 **n = ___**



5. -3 - (- 7) = n ⟶ - 7 + n = -3 **n = ___**



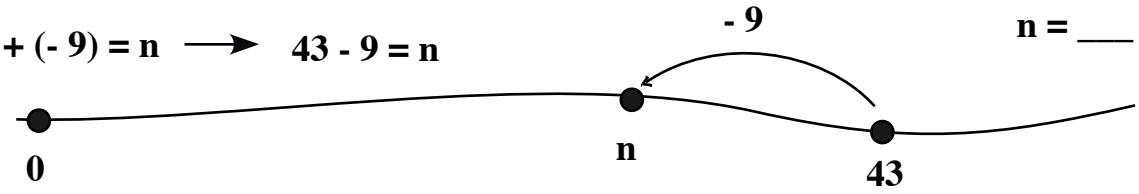
6. - 1 - (6) = n ⟶ 6 + n = -1 **n = ___**



Copyright © 2002 Mathematics Learning

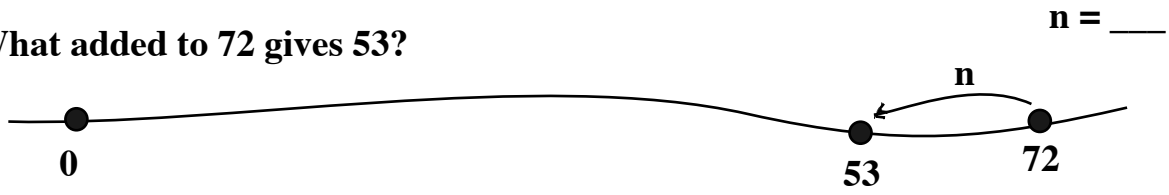
Adding and Subtracting Integers # 2

1. $43 + (-9) = n \longrightarrow 43 - 9 = n$

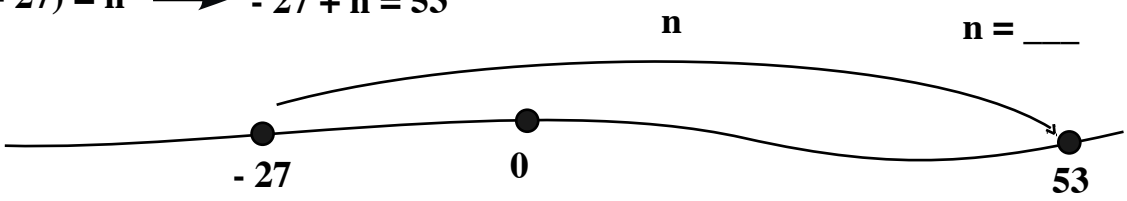


2. $53 - 72 = n \longrightarrow 72 + n = 53$

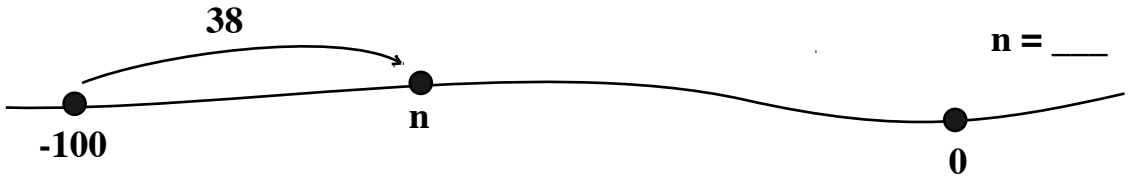
What added to 72 gives 53?



3. $53 - (-27) = n \longrightarrow -27 + n = 53$

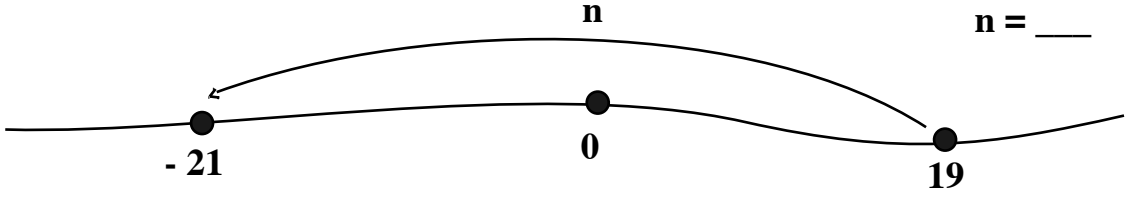


4. $-100 + 38 = n$



5. $-57 - (-85) = n \longrightarrow -85 + n = -57$

6. $-21 - (19) = n \longrightarrow 19 + n = -21$

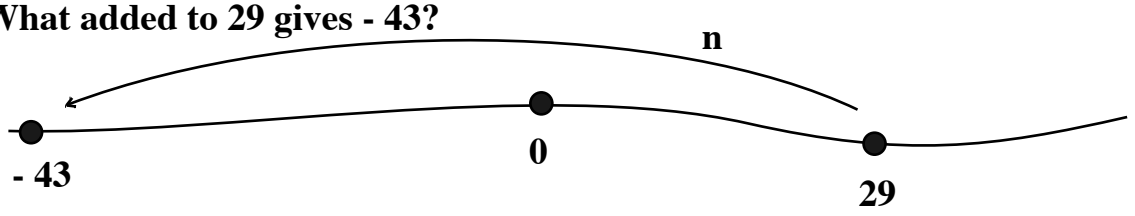


Copyright © 2002 Mathematics Learning

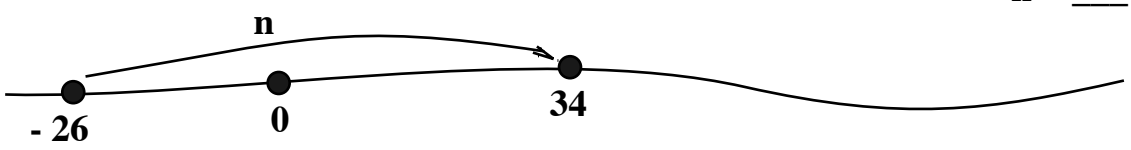
Adding and Subtracting integers # 3

1. **- 43 - 29 = n ⟶ 29 + n = - 43** **n = ___**

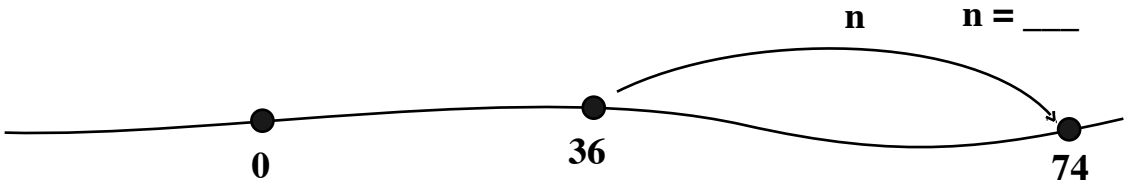
What added to 29 gives - 43?



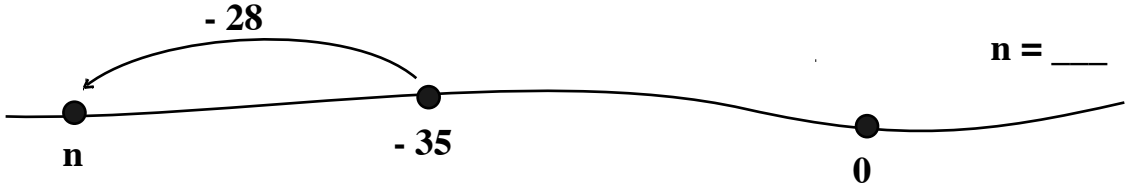
2. **34 - (-26) = n ⟶ - 26 + n = 34** **n = ___**



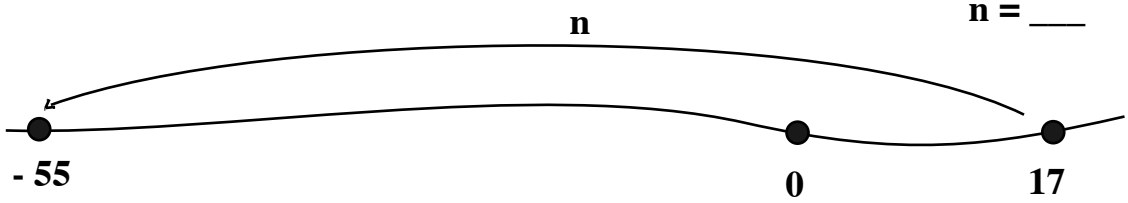
3. **74 - 36 = n ⟶ 36 + n = 74** **n = ___**



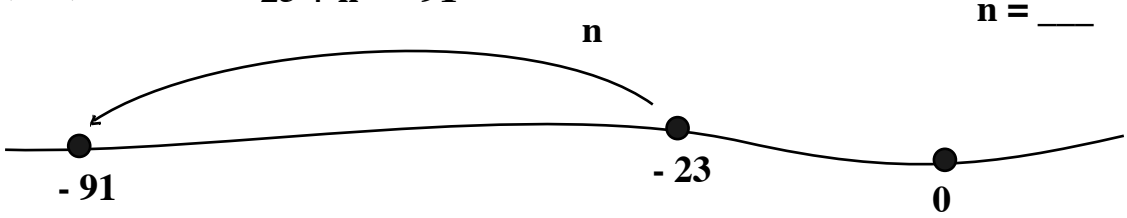
4. **-28 + (- 35) = n** **n = ___**



5. **-55 - 17 = n** **n = ___**



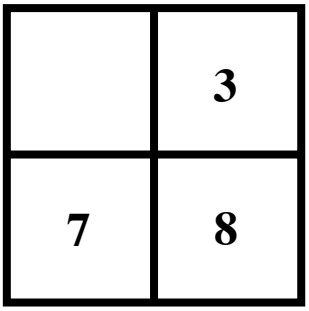
6. **-91 - (- 23) = n ⟶ - 23 + n = - 91** **n = ___**



Copyright © 2002 Mathematics Learning

Integer Math Squares # 1

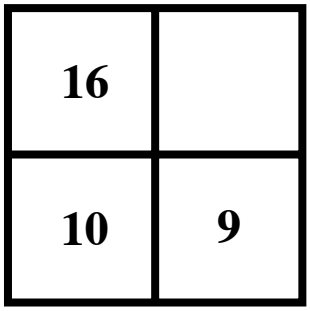
1.



	3
7	8

14

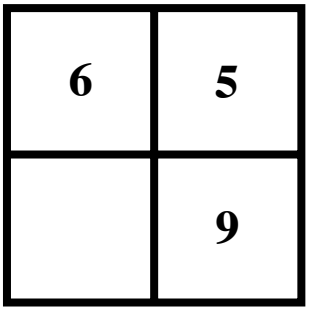
2.



16	
10	9

30

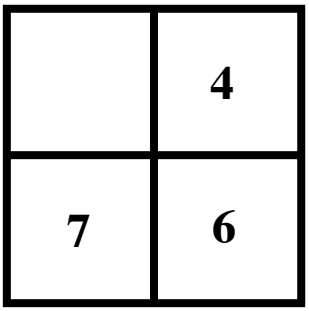
3.



6	5
	9

0

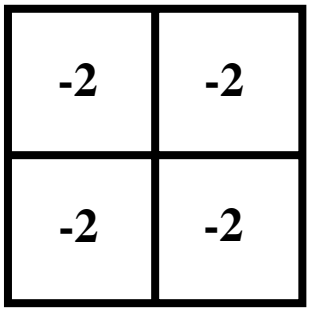
4.



	4
7	6

7

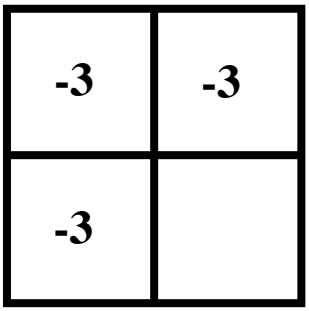
5.



-2	-2
-2	-2

_____

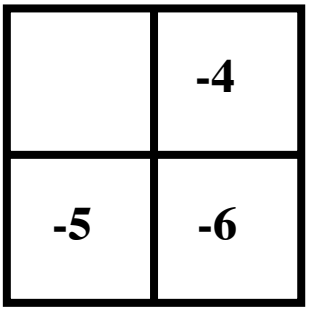
6.



-3	-3
-3	

1

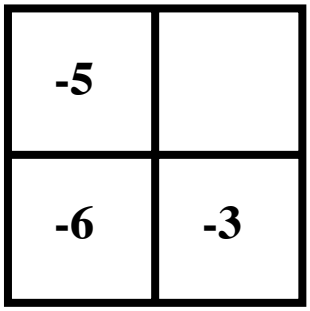
7.



	-4
-5	-6

-14

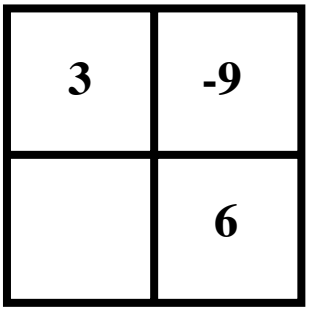
8.



-5	
-6	-3

-8

9.



3	-9
	6

0

Copyright © 2002 Mathematics Learning

Integer Math Squares # 2

1.

3	4
-1	-5

2.

-3	-4
-2	8

3.

-4	-3
-7	-6

4.

-7	4
	-4

-8

5.

3	9
	-8

-2

6.

-2	-4
-6	

-9

7.

	-4
2	8

-6

8.

-7	
7	8

0

9.

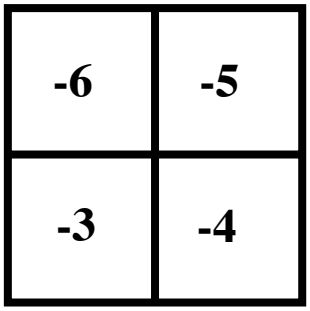
-2	-3
	-4

-1

Copyright © 2002 Mathematics Learning

Integer Math Squares # 3

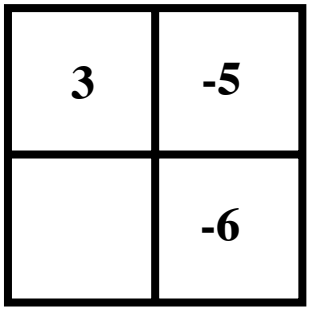
1.



-6	-5
-3	-4

_____

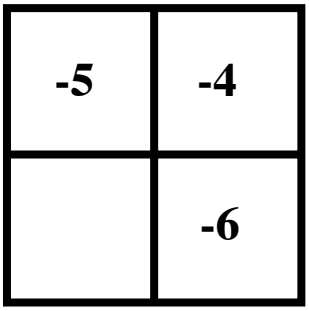
2.



3	-5
	-6

7

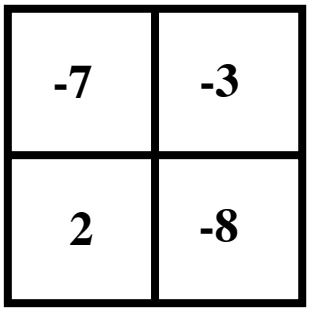
3.



-5	-4
	-6

-18

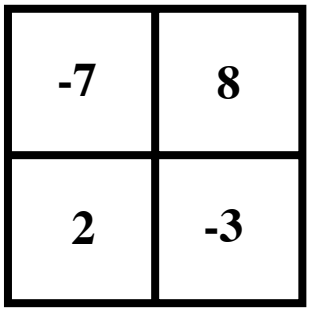
4.



-7	-3
2	-8

_____

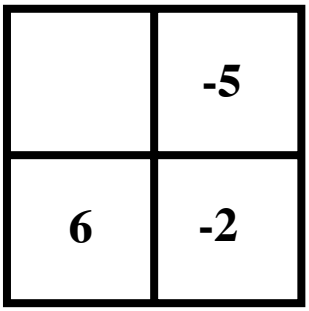
5.



-7	8
2	-3

_____

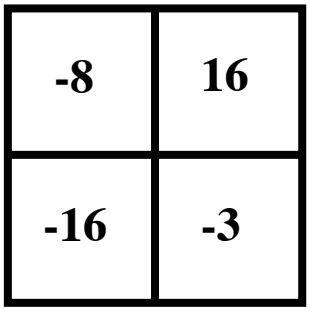
6.



	-5
6	-2

4

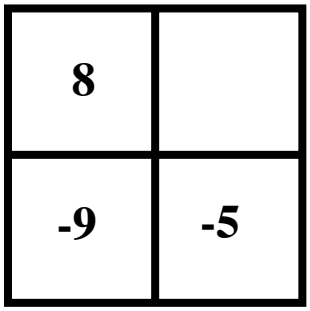
7.



-8	16
-16	-3

_____

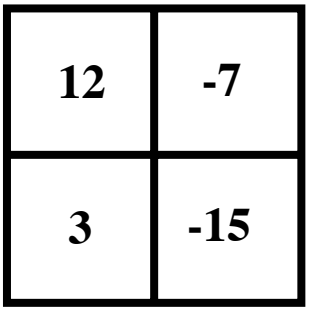
8.



8	
-9	-5

10

9.



12	-7
3	-15

_____

Copyright © 2002 Mathematics Learning

Integer Math Squares # 4

1.

-8	-8
-8	-8

_____

2.

9	-1
-3	

5

3.

4	-2
-5	-3

_____

4.

-6	-6
-6	

-60

5.

-8	5
1	2

_____

6.

	-8
12	2

9

7.

-3	7
	-8

-11

8.

7	
1	-9

-6

9.

-5	
3	2

-9

Copyright © 2002 Mathematics Learning

Integer Math Squares # 5

1.

-5	-2
-3	

7

2.

-8	-6
18	-2

_____

3.

-9	
-7	14

8

4.

	10
-3	9

4

5.

-3	-9
-27	-31

_____

6.

-36	17
	-3

-39

7.

-51	-49
	74

0

8.

-3	-7
-8	

-16

9.

	-4
-2	-6

-15

Copyright © 2002 Mathematics Learning

Integer Math Squares # 6

1.

-5	-4
-14	-11

_____

2.

	23
-4	-13

10

3.

6	3
1	-12

_____

4.

-24	-36
12	18

_____

5.

-21	-21
-21	-21

_____

6.

	-14
4	-19

-35

7.

	6
7	5

-2

8.

-5	
8	-4

3

9.

-4	-5
	9

-1

Copyright © 2002 Mathematics Learning

Integer Math Squares # 7

1.

14	-6
-4	-5

_____

2.

	12
-4	

-10

3.

	22
13	-37

-3

4.

-60	-17
	-3

20

5.

-37	-37
-37	-37

_____

6.

	-2
56	-98

0

7.

	-27
-29	-43

1

8.

-8	
-8	-8

4

9.

-17	
40	-13

-25

Copyright © 2002 Mathematics Learning

Integer Math Squares # 8

1.

-2	-3
-20	

-15

2.

	-8
-6	-11

15

3.

-6	-4
-2	

-9

4.

-22	-39
2	9

5.

-9	-9
-9	-9

6.

	-14
15	-26

-26

7.

	-4
-7	

-12

8.

-72	
9	3

-50

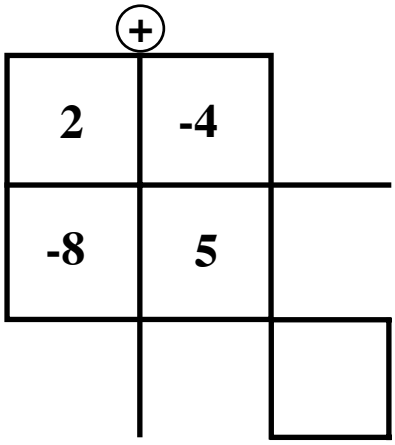
9.

-4	-5
-8	17

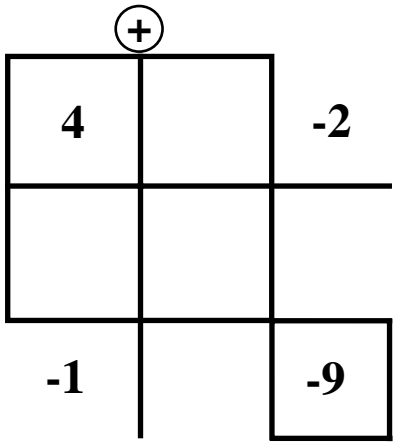
Copyright © 2002 Mathematics Learning

Integer Two Ways # 1

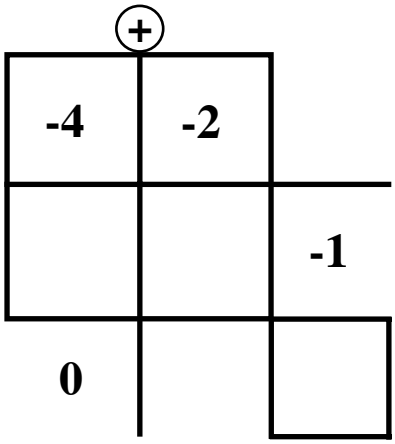
1.



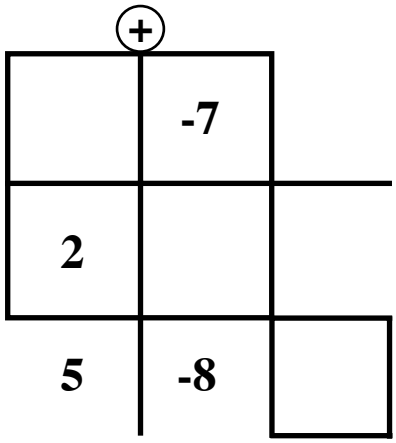
2.



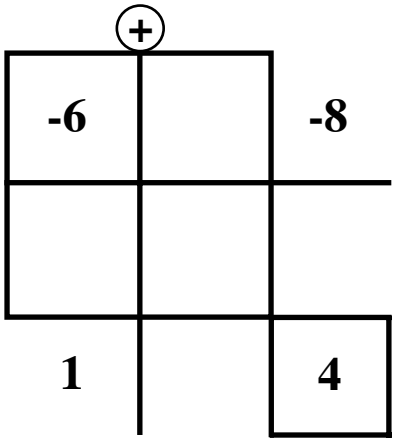
3.



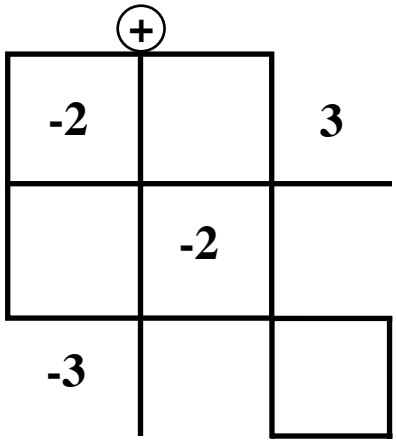
4.



5.



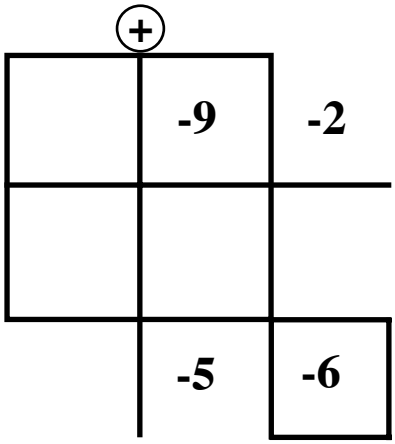
6.



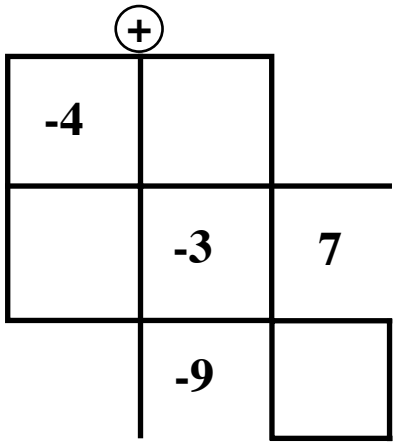
Copyright © 2002 Mathematics Learning

Integer Two Ways # 2

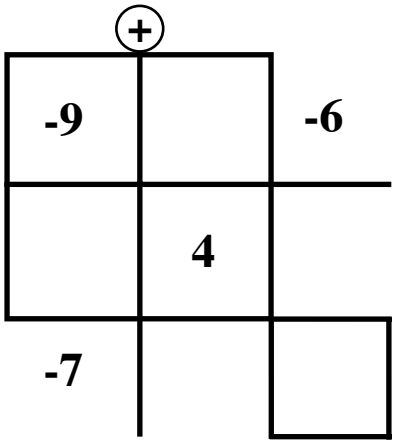
1.



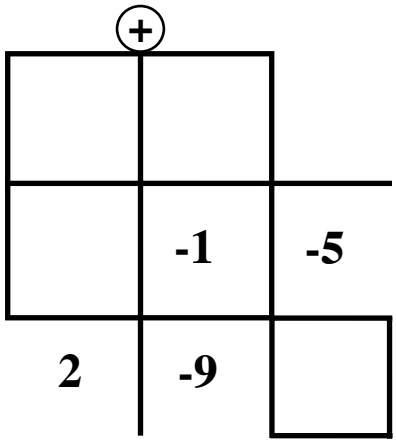
2.



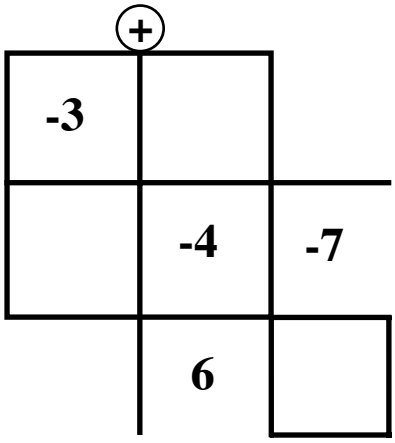
3.



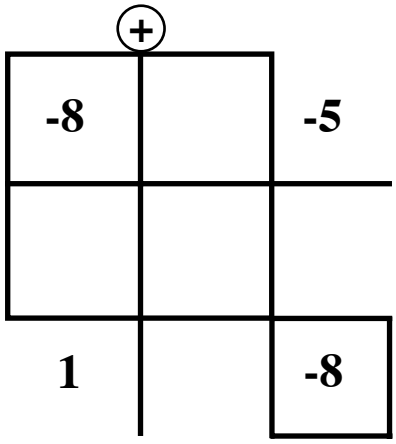
4.



5.



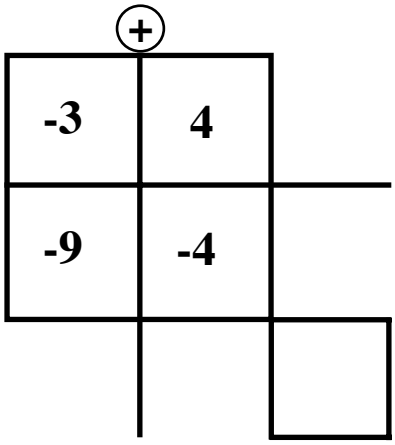
6.



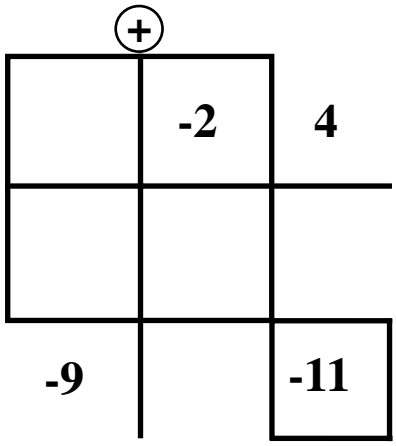
Copyright © 2002 Mathematics Learning

Integer Two Ways # 3

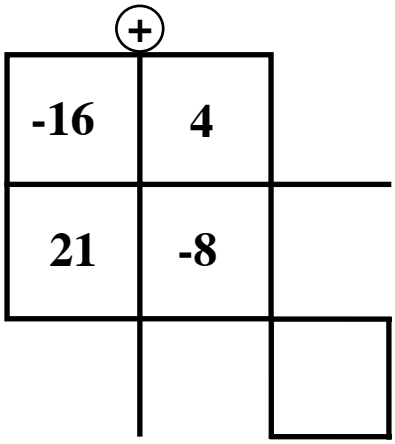
1.



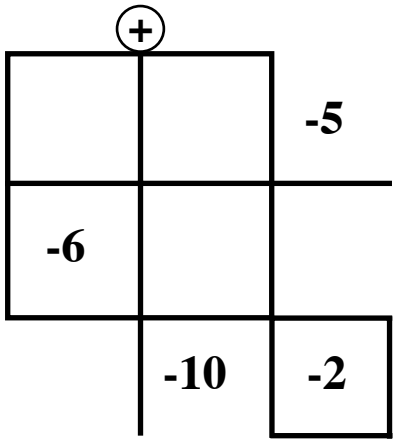
2.



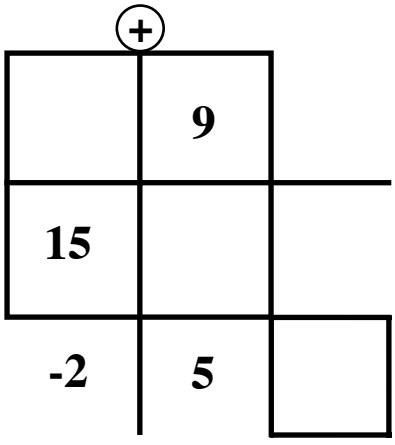
3.



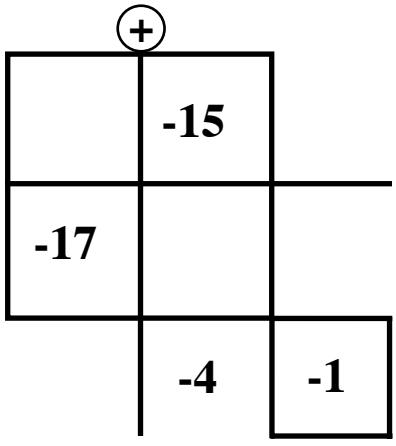
4.



5.



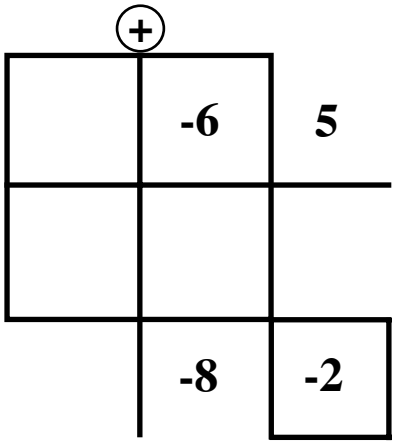
6.



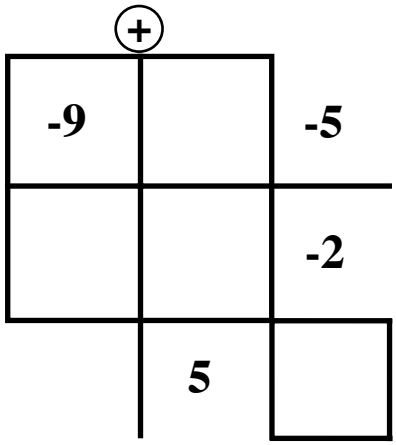
Copyright © 2002 Mathematics Learning

Integer Two Ways # 4

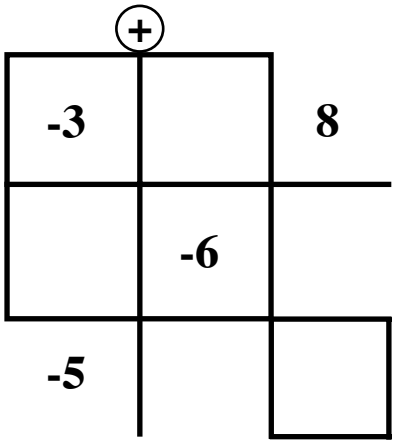
1.



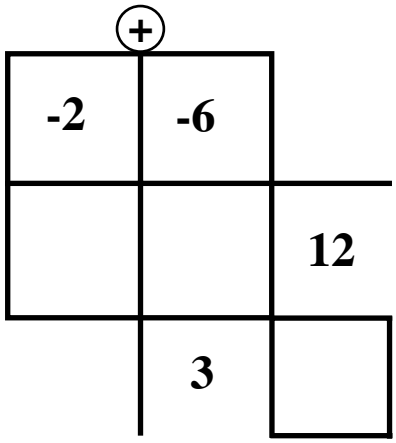
2.



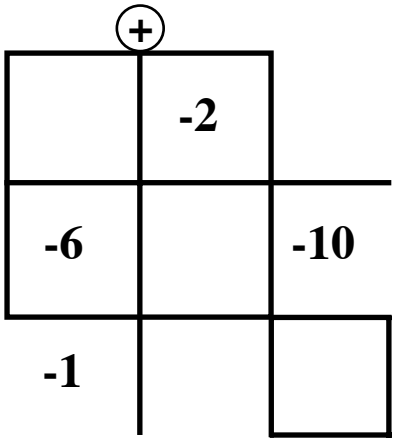
3.



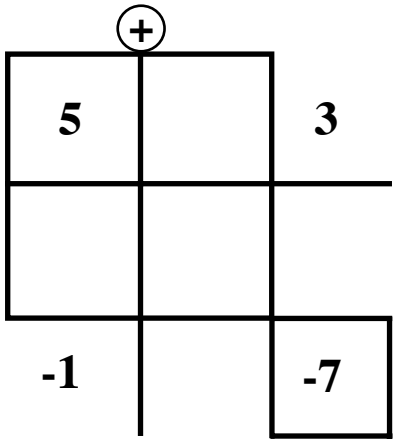
4.



5.



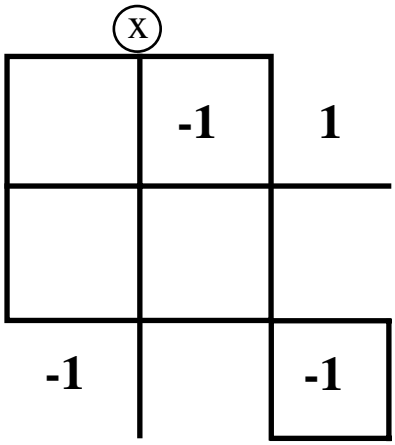
6.



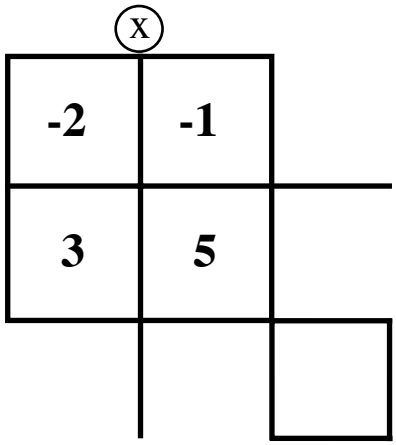
Copyright © 2002 Mathematics Learning

Integer Two Ways # 5

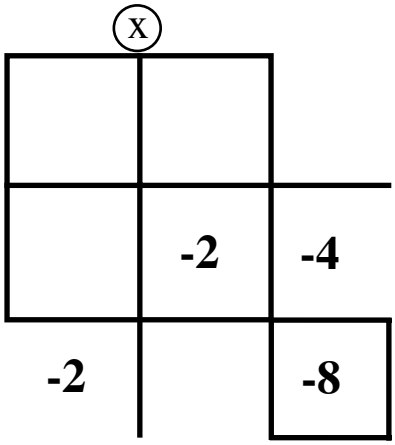
1.



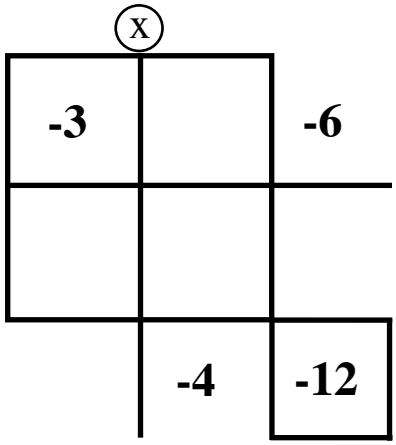
2.



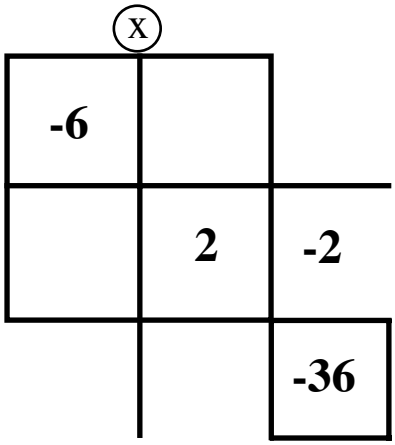
3.



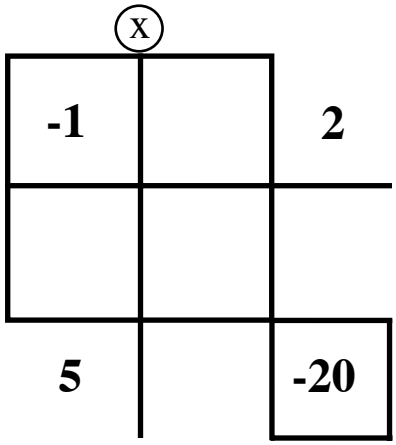
4.



5.



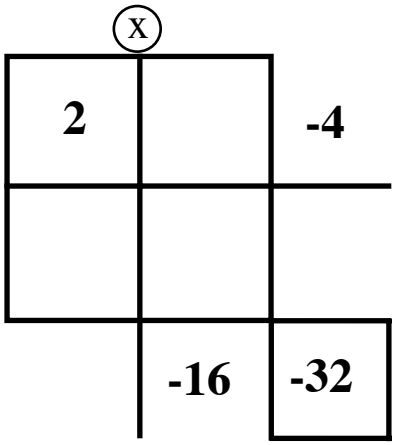
6.



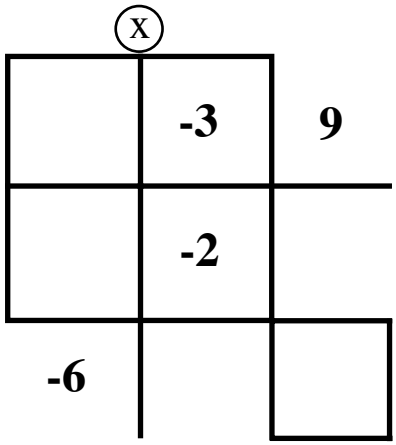
Copyright © 2002 Mathematics Learning

Integer Two Ways # 6

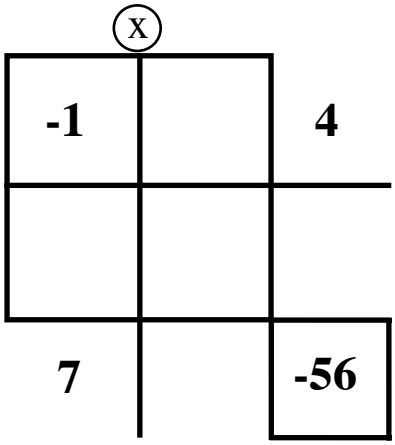
1.



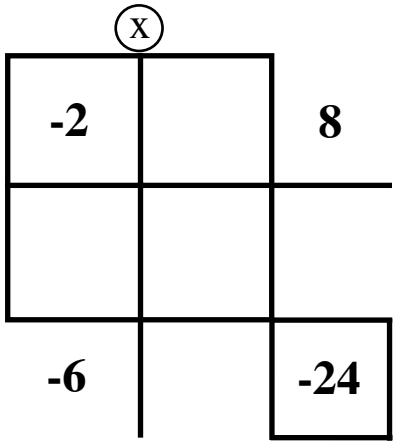
2.



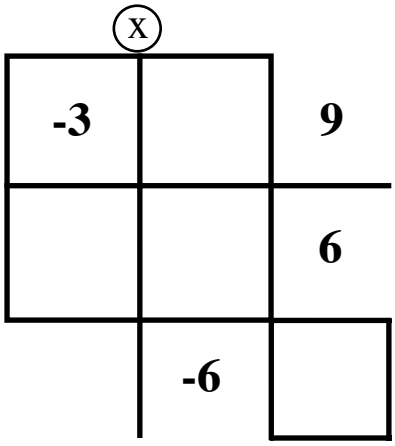
3.



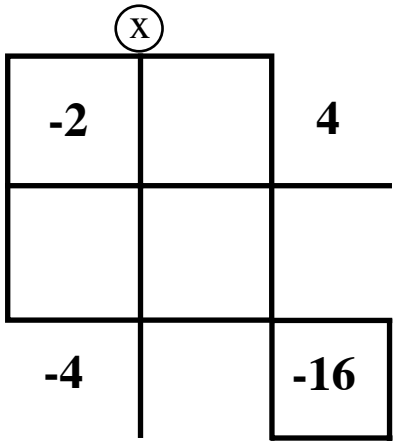
4.



5.



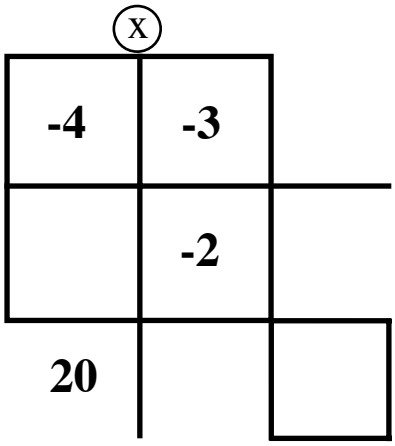
6.



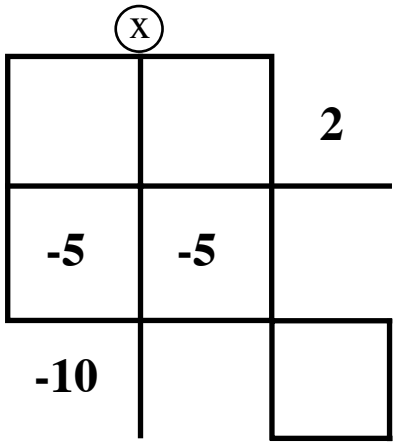
Copyright © 2002 Mathematics Learning

Integer Two Ways # 7

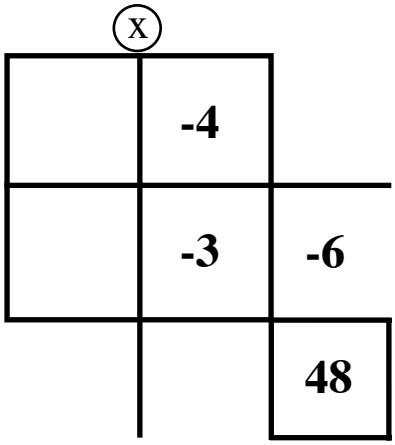
1.



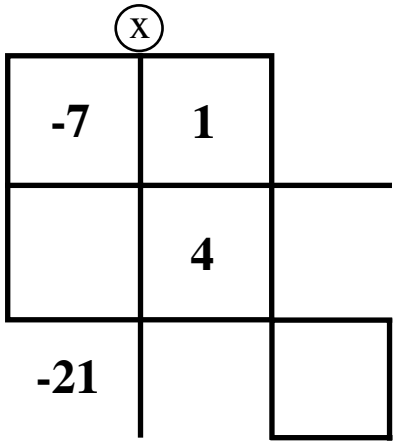
2.



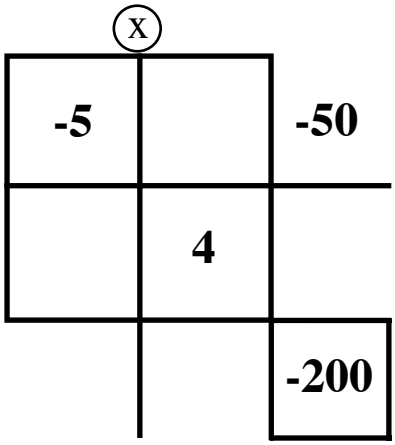
3.



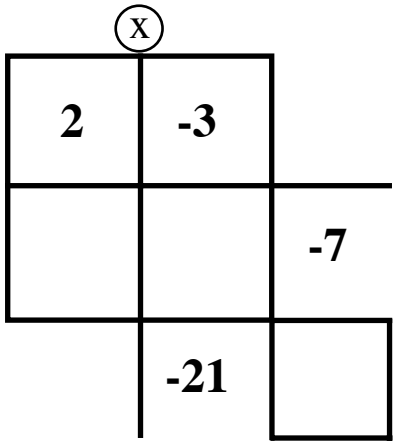
4.



5.



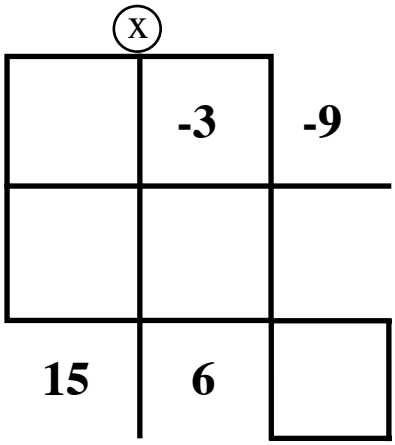
6.



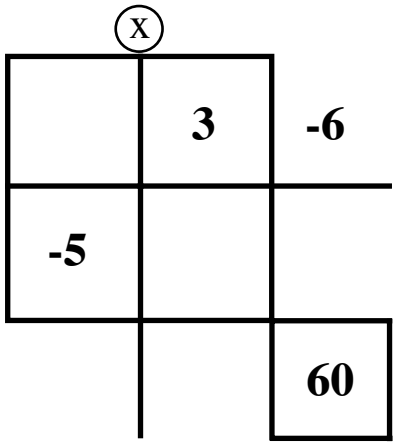
Copyright © 2002 Mathematics Learning

Integer Two Ways # 8

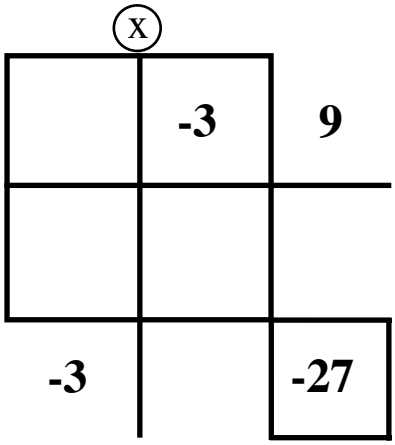
1.



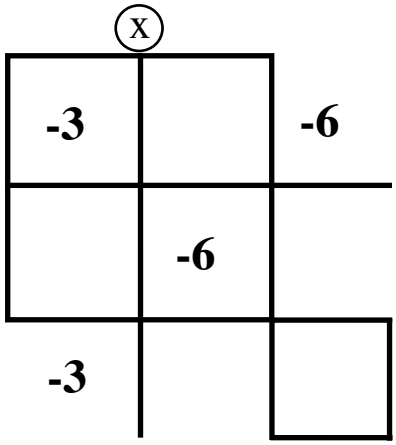
2.



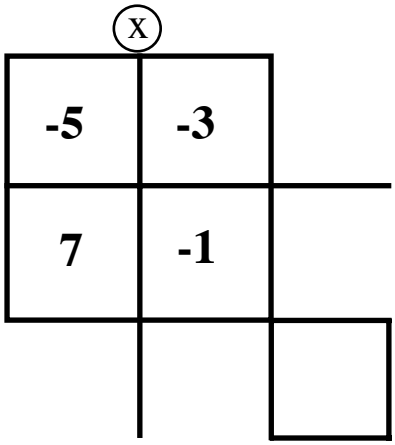
3.



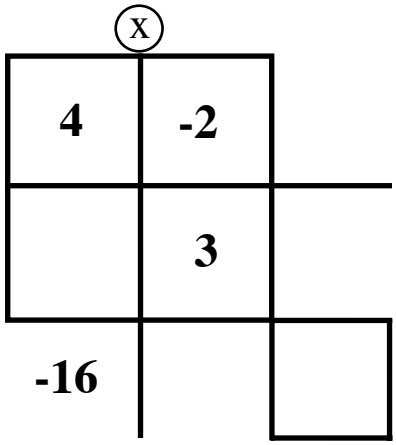
4.



5.

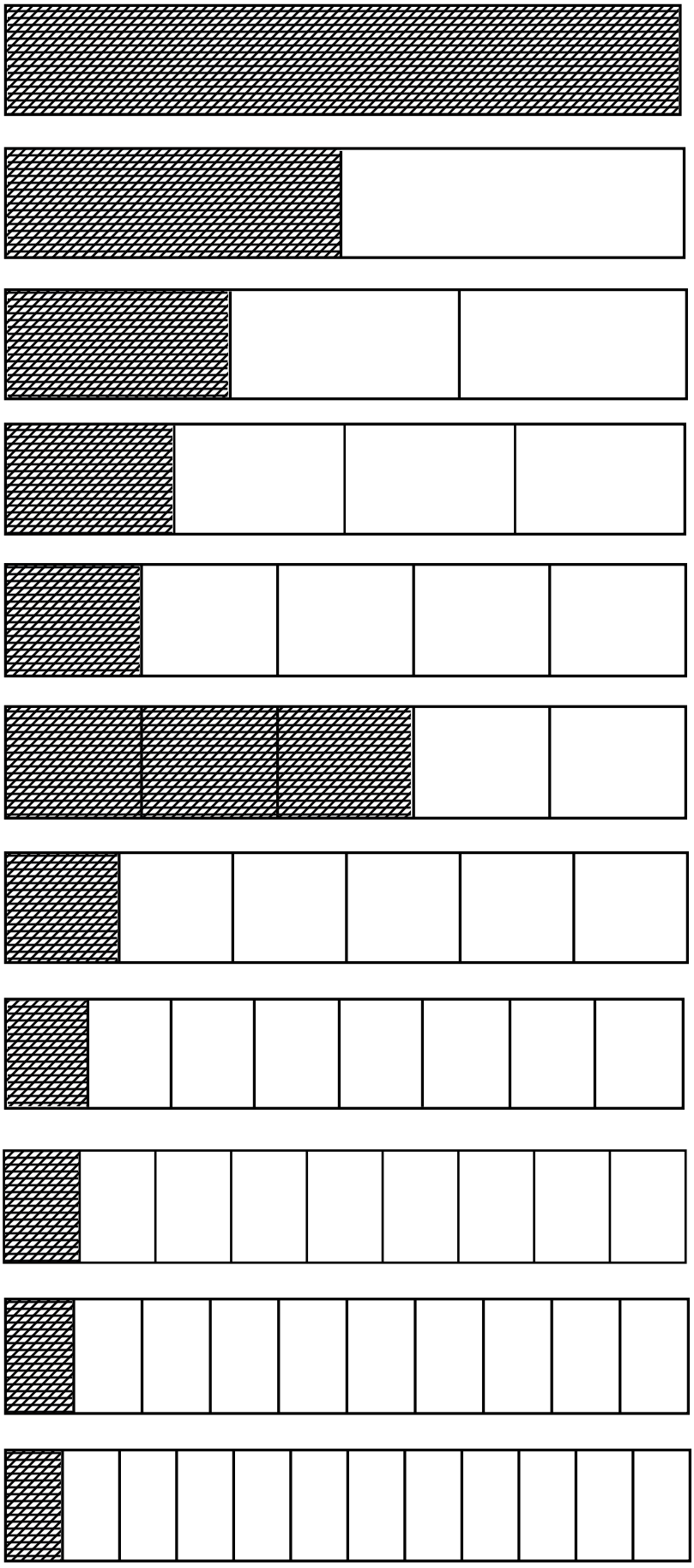


6.



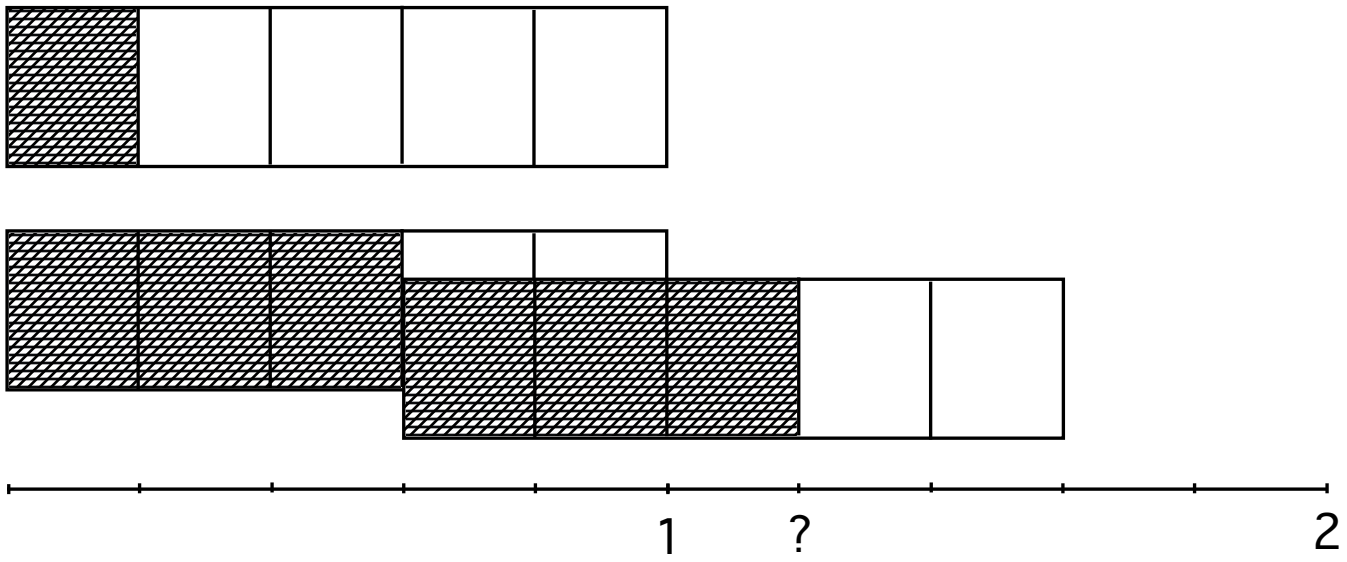
Copyright © 2002 Mathematics Learning

Fraction Bars

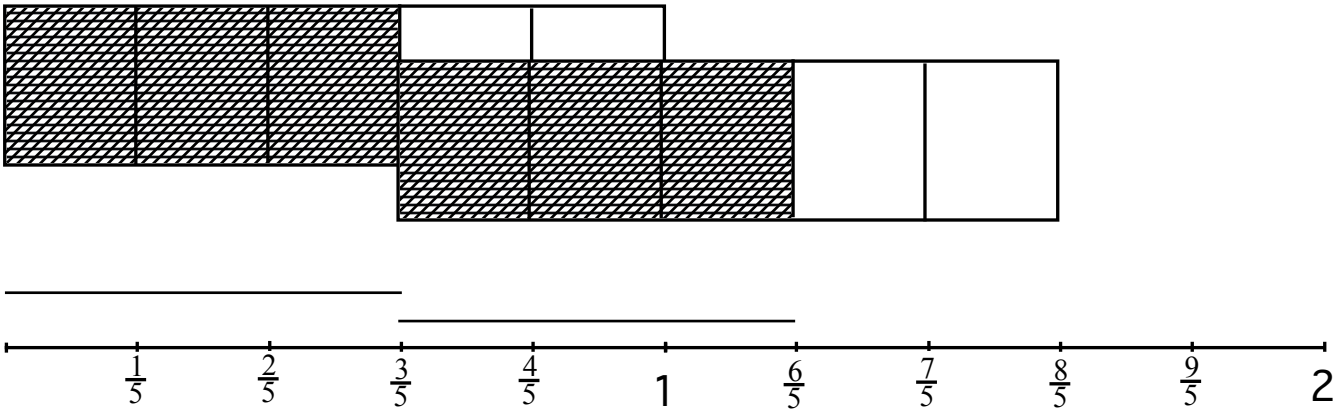


Copyright © 2002 Mathematics Learning

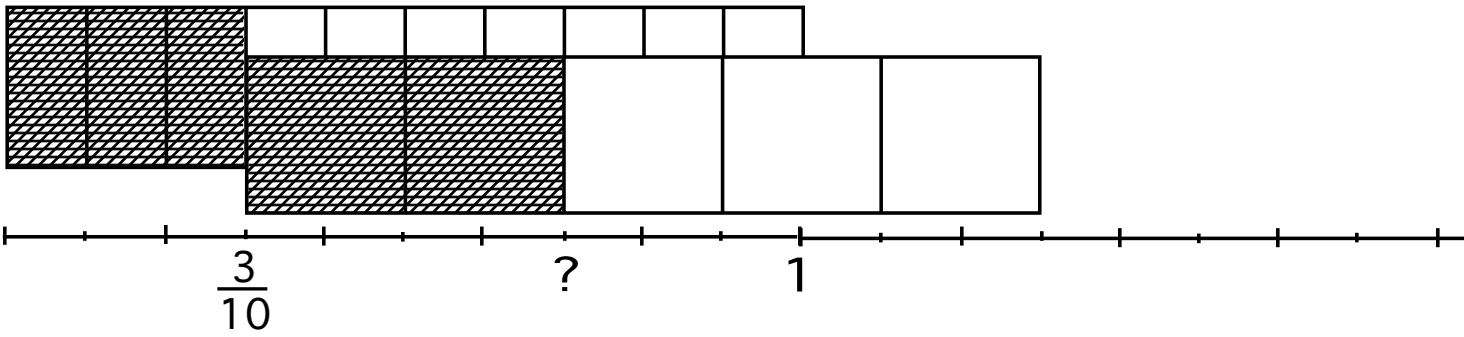
Adding Fractions



$$\frac{3}{5} + \frac{3}{5} = \frac{6}{5}$$

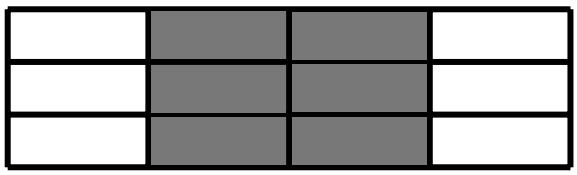


$$\frac{3}{10} + \frac{2}{5}$$



Copyright © 2002 Mathematics Learning

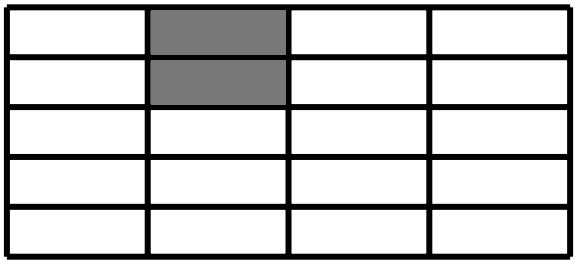
Fractions # 1

1. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

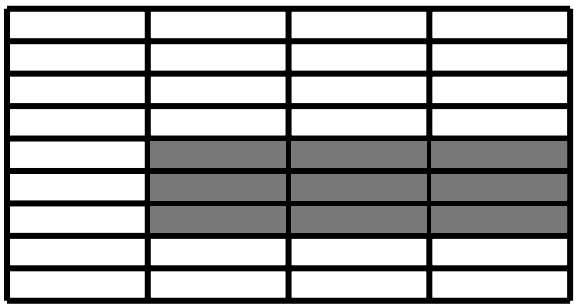
c. Express your answer using other fraction names. _____

2. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

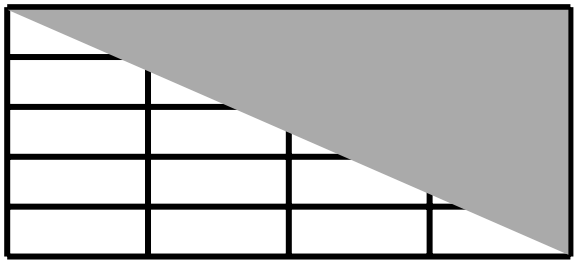
c. Express your answer using other fraction names._____

3. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

c. Express your answer using other fraction name _____

4. 

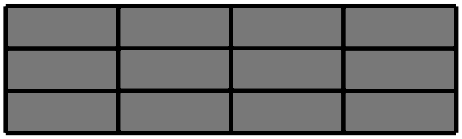
a. What fraction of the figure is shaded? _____

b. What fraction of the figure is NOT shaded? _____

c. Express your answer using other fraction names._____

Copyright © 2002 Mathematics Learning

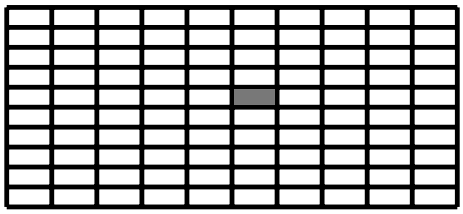
Fractions # 2

1. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

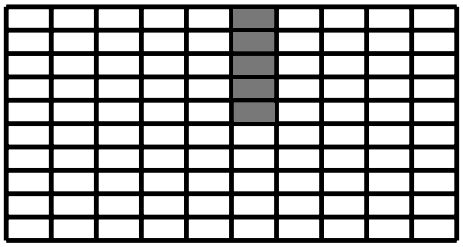
c. Express your answer using other fraction names. _____

2. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

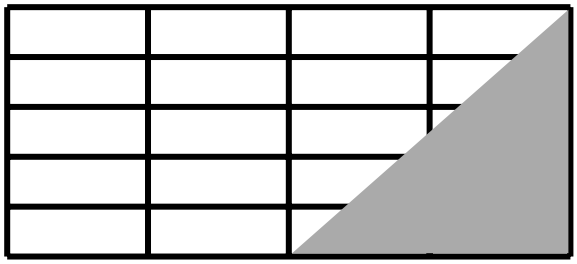
c. Express your answer using other fraction names._____

3. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

c. Express your answer using other fraction name _____

4. 

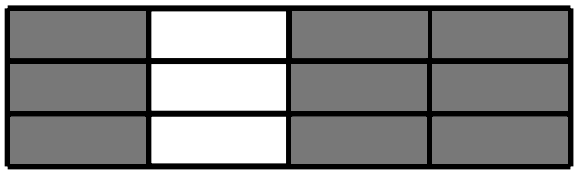
a. What fraction of the figure is shaded? _____

b. What fraction of the figure is NOT shaded? _____

c. Express your answer using other fraction names._____

Copyright © 2002 Mathematics Learning

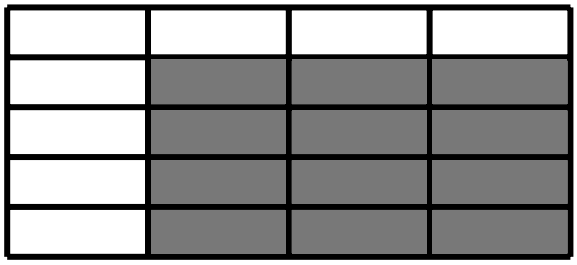
Fractions # 3

1. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

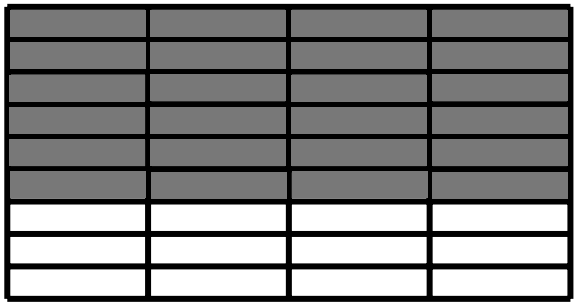
c. Express your answer using other fraction names. _____

2. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

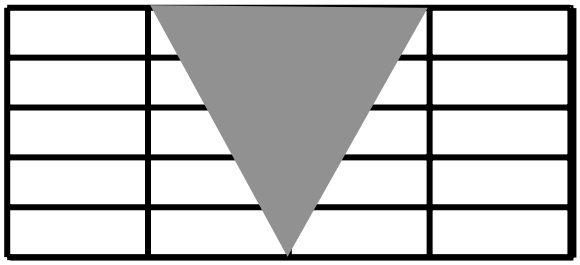
c. Express your answer using other fraction names._____

3. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

c. Express your answer using other fraction name _____

4. 

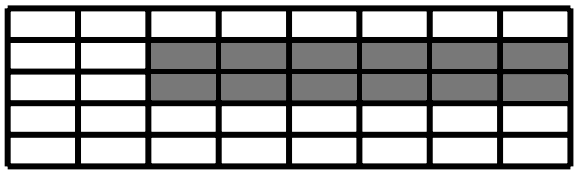
a. What fraction of the figure is shaded? _____

b. What fraction of the figure is NOT shaded? _____

c. Express your answer using other fraction names._____

Copyright © 2002 Mathematics Learning

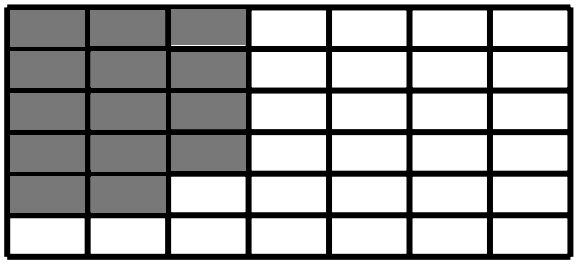
Fractions # 4

1. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

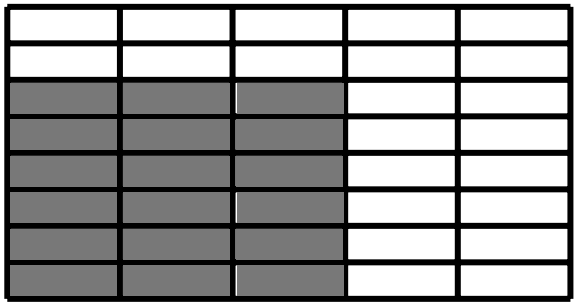
c. Express your answer using other fraction names. _____

2. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

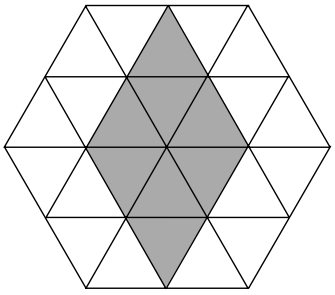
c. Express your answer using other fraction names._____

3. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

c. Express your answer using other fraction name _____

4. 

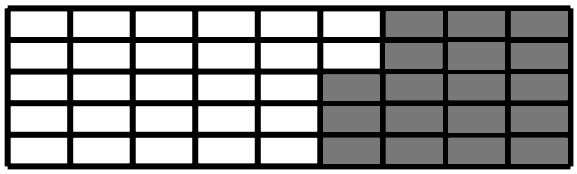
a. What fraction of the figure is shaded? _____

b. What fraction of the figure is NOT shaded? _____

c. Express your answer using other fraction names._____

Copyright © 2002 Mathematics Learning

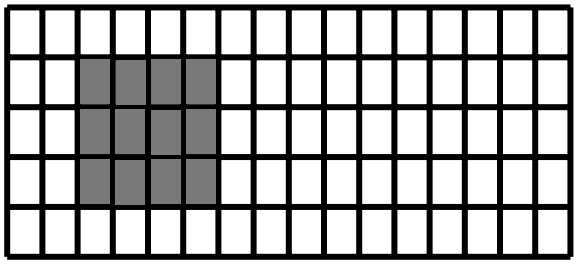
Fractions # 5

1. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

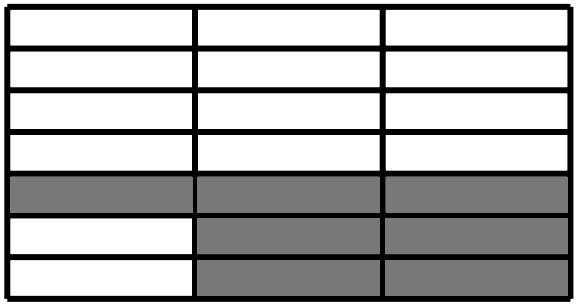
c. Express your answer using other fraction names. _____

2. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

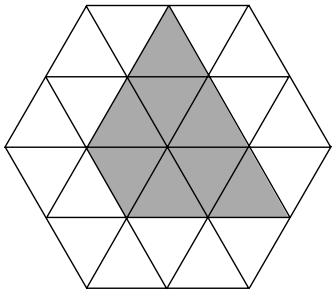
c. Express your answer using other fraction names._____

3. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

c. Express your answer using other fraction name _____

4. 

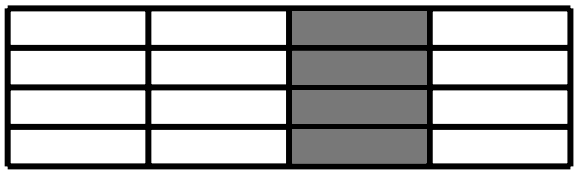
a. What fraction of the figure is shaded? _____

b. What fraction of the figure is NOT shaded? _____

c. Express your answer using other fraction names._____

Copyright © 2002 Mathematics Learning

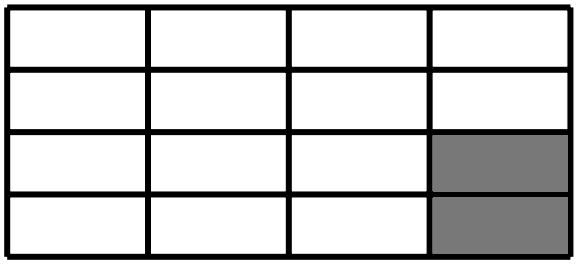
Fractions # 6

1. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

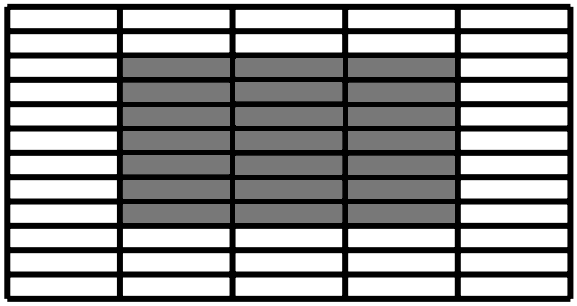
c. Express your answer using other fraction names. _____

2. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

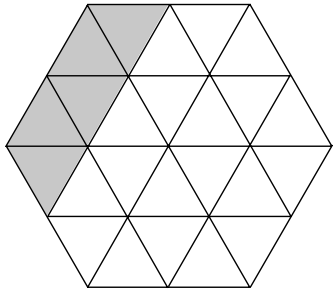
c. Express your answer using other fraction names._____

3. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

c. Express your answer using other fraction name _____

4. 

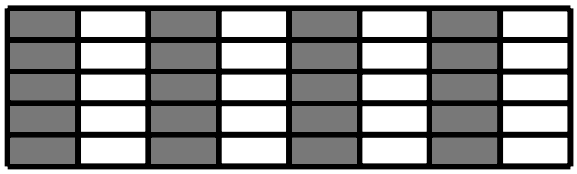
a. What fraction of the figure is shaded? _____

b. What fraction of the figure is NOT shaded? _____

c. Express your answer using other fraction names._____

Copyright © 2002 Mathematics Learning

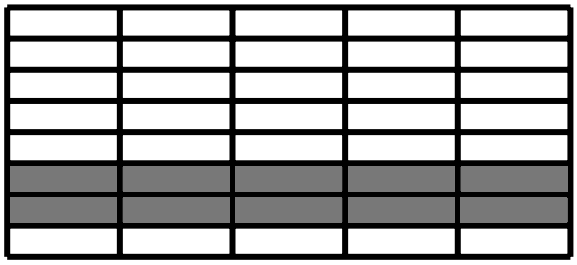
Fractions # 7

1. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

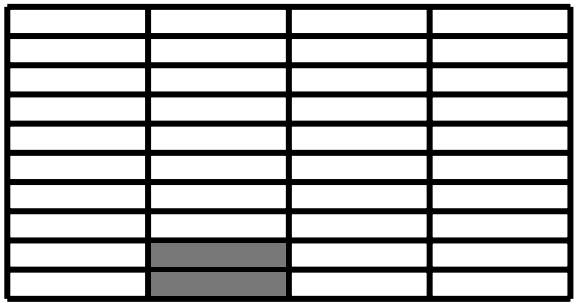
c. Express your answer using other fraction names. _____

2. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

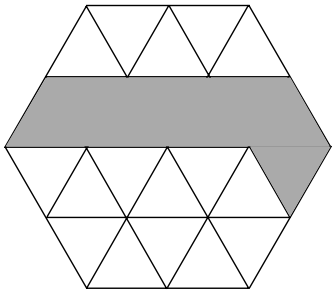
c. Express your answer using other fraction names._____

3. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

c. Express your answer using other fraction name _____

4. 

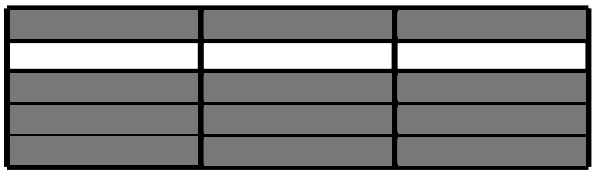
a. What fraction of the figure is shaded? _____

b. What fraction of the figure is NOT shaded? _____

c. Express your answer using other fraction names._____

Copyright © 2002 Mathematics Learning

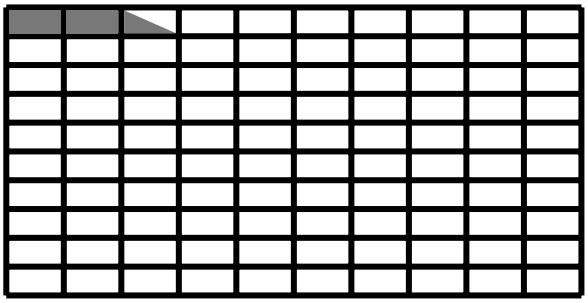
Fractions # 8

1. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

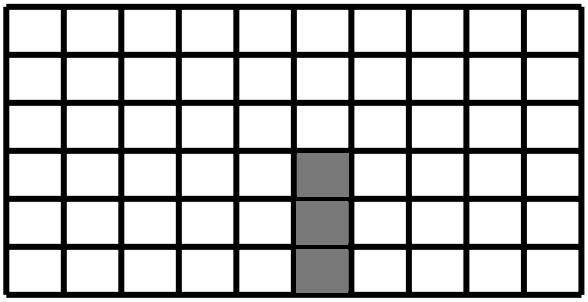
c. Express your answer using other fraction names. _____

2. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

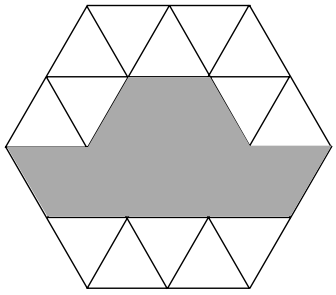
c. Express your answer using other fraction names._____

3. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

c. Express your answer using other fraction name _____

4. 

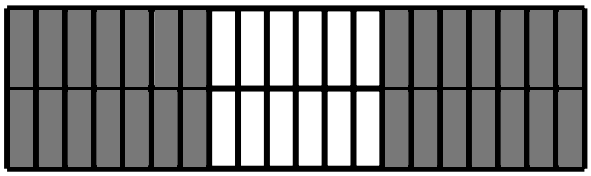
a. What fraction of the figure is shaded? _____

b. What fraction of the figure is NOT shaded? _____

c. Express your answer using other fraction names._____

Copyright © 2002 Mathematics Learning

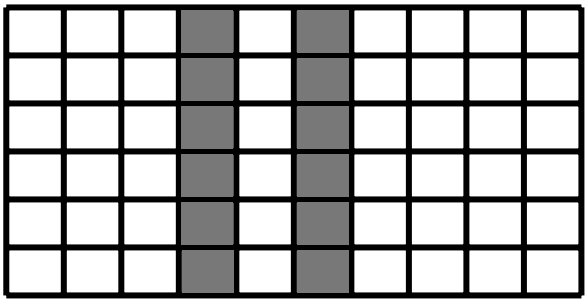
Fractions # 9

1. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

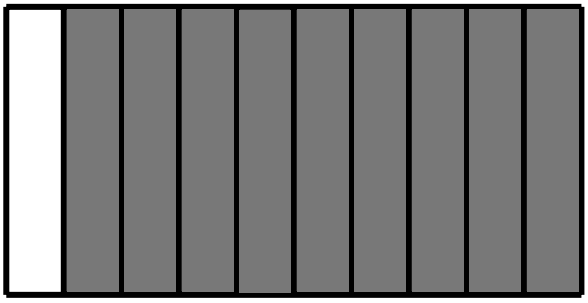
c. Express your answer using other fraction names. _____

2. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

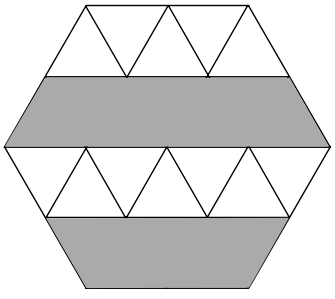
c. Express your answer using other fraction names._____

3. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

c. Express your answer using other fraction name _____

4. 

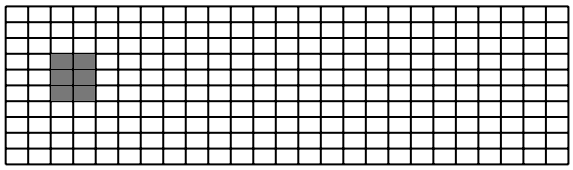
a. What fraction of the figure is shaded? _____

b. What fraction of the figure is NOT shaded? _____

c. Express your answer using other fraction names._____

Copyright © 2002 Mathematics Learning

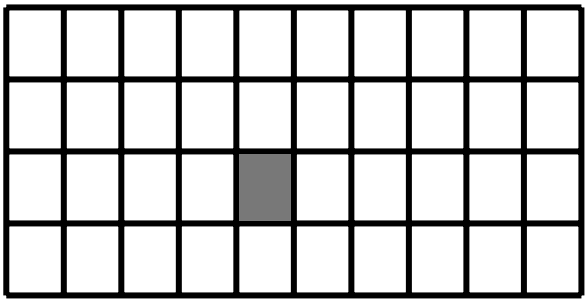
Fractions # 10

1. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

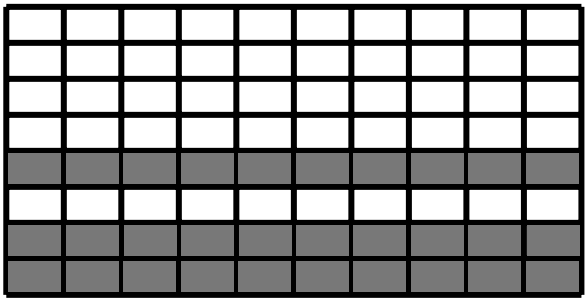
c. Express your answer using other fraction names. _____

2. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

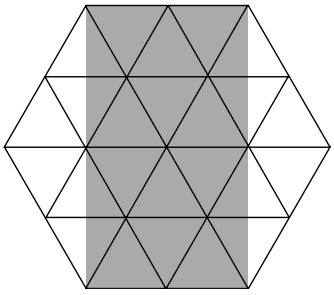
c. Express your answer using other fraction names._____

3. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

c. Express your answer using other fraction name _____

4. 

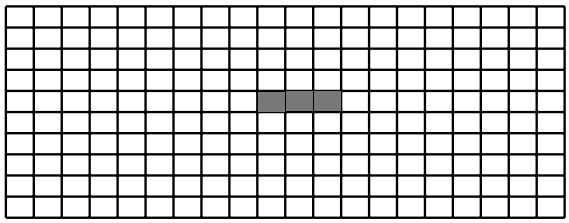
a. What fraction of the figure is shaded? _____

b. What fraction of the figure is NOT shaded? _____

c. Express your answer using other fraction names._____

Copyright © 2002 Mathematics Learning

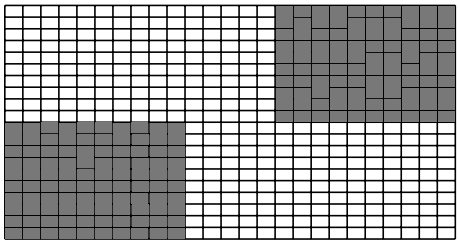
Fractions # 11

1. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

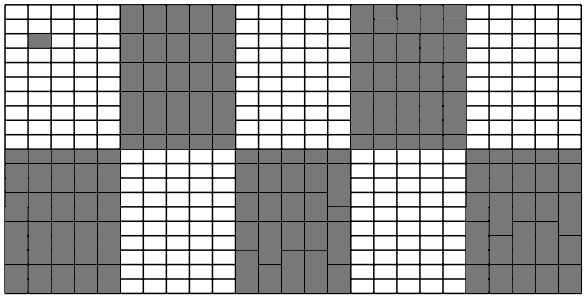
c. Express your answer using other fraction names. _____

2. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

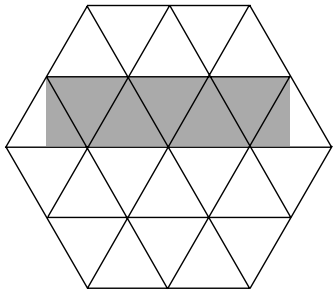
c. Express your answer using other fraction names._____

3. 

a. What fraction of the rectangle is shaded? _____

b. What fraction of the rectangle is NOT shaded? _____

c. Express your answer using other fraction name _____

4. 

a. What fraction of the figure is shaded? _____

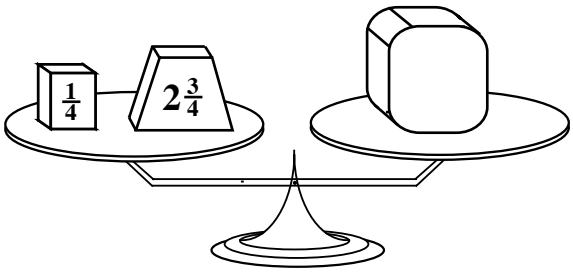
b. What fraction of the figure is NOT shaded? _____

c. Express your answer using other fraction names._____

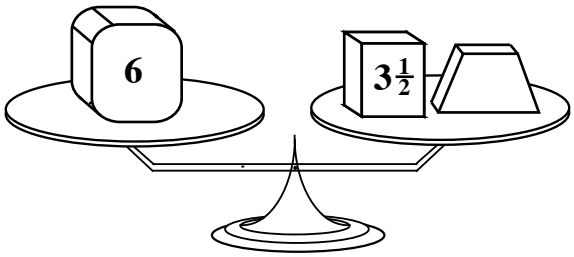
Copyright © 2002 Mathematics Learning

Fraction Balance # 1

1.

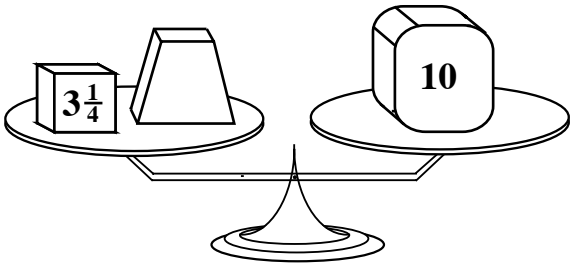


2.

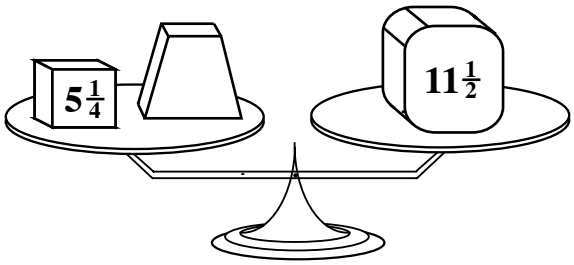


Boxes that are the same size and shape must have the same number in them.

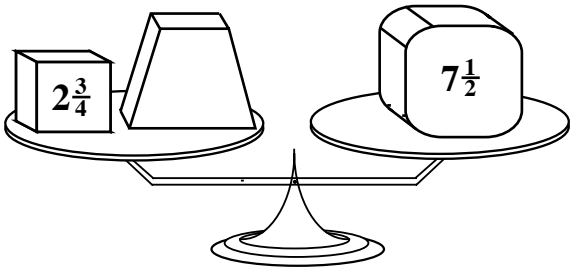
3.



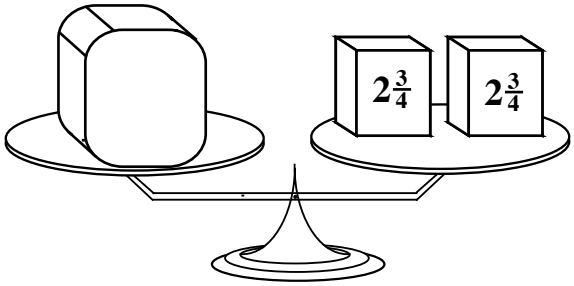
4.



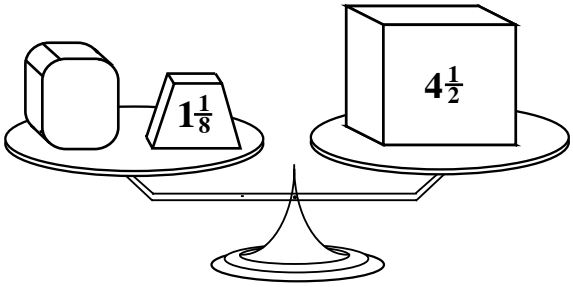
5.



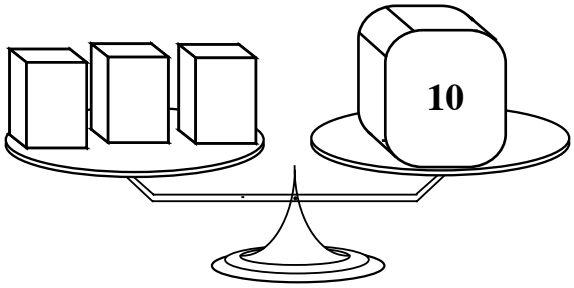
6.



7.



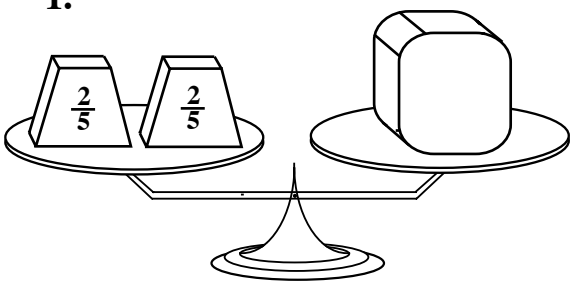
8.



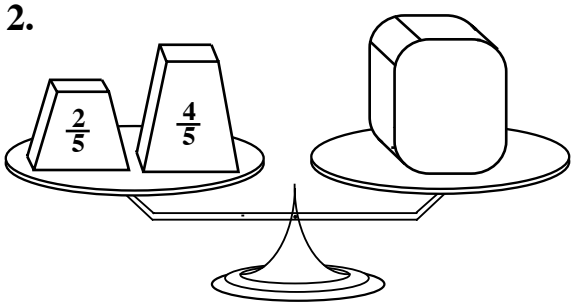
Copyright © 2002 Mathematics Learning

Fraction Balance # 2

1.

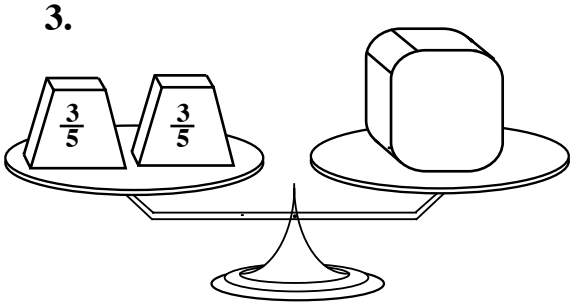


2.

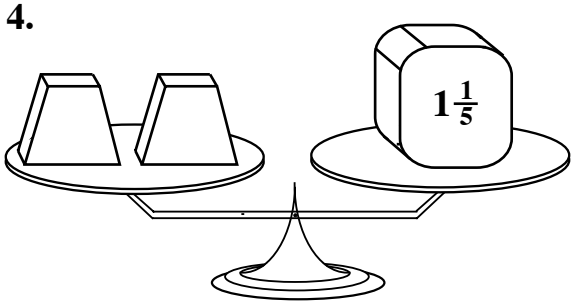


Boxes that are the same size and shape must have the same number in them.

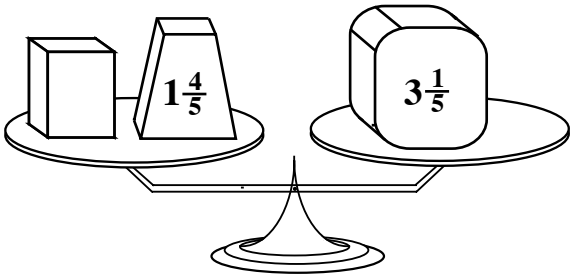
3.



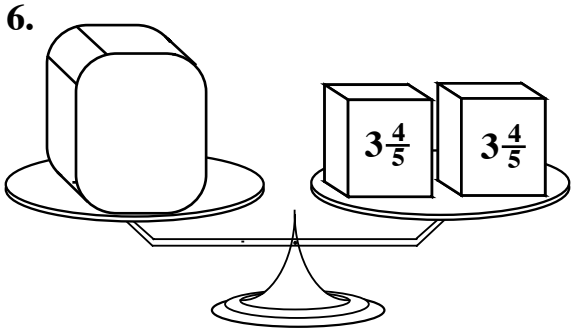
4.



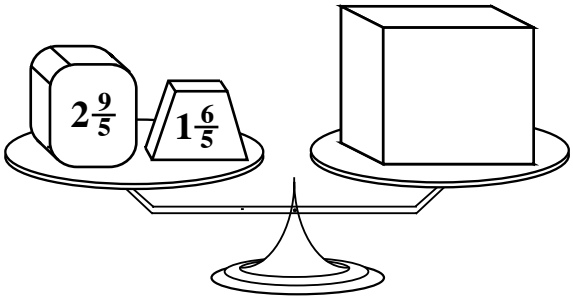
5.



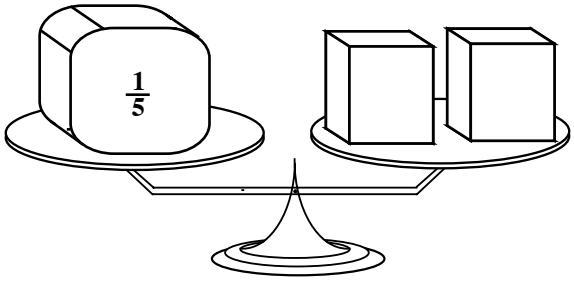
6.



7.



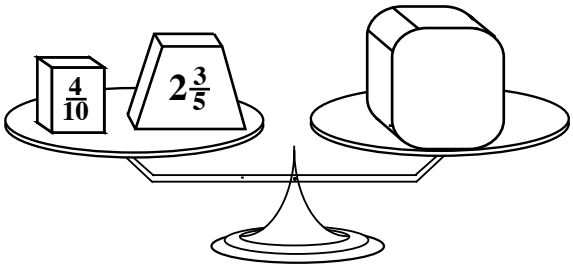
8.



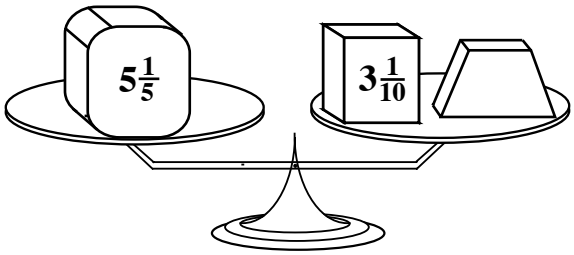
Copyright © 2002 Mathematics Learning

Fraction Balance # 3

1.

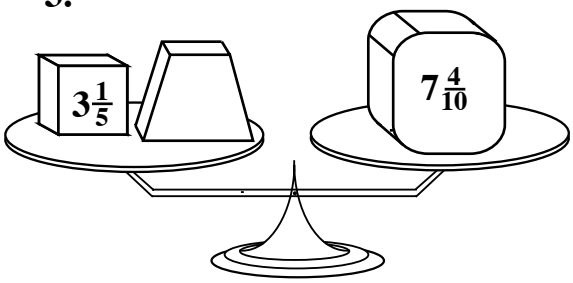


2.

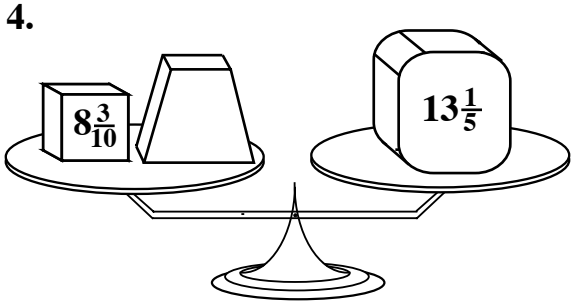


Boxes that are the same size and shape must have the same number in them.

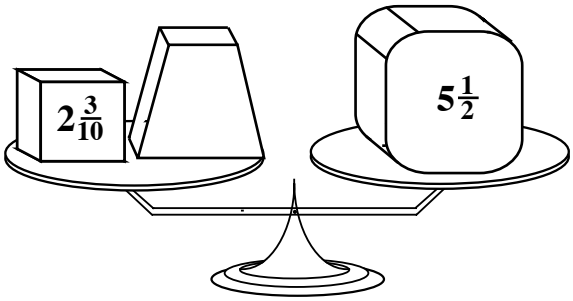
3.



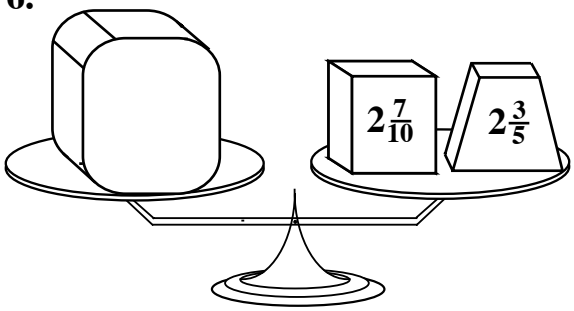
4.



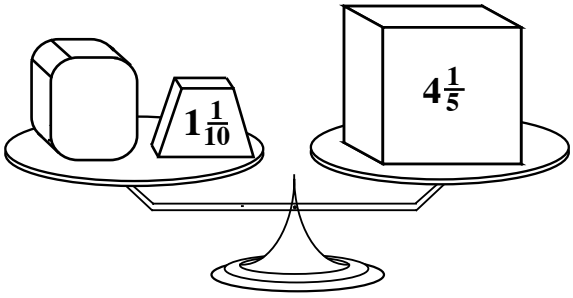
5.



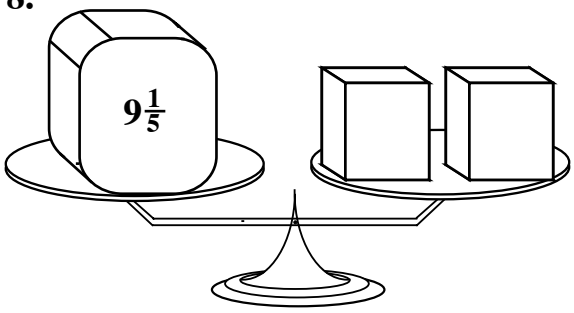
6.



7.



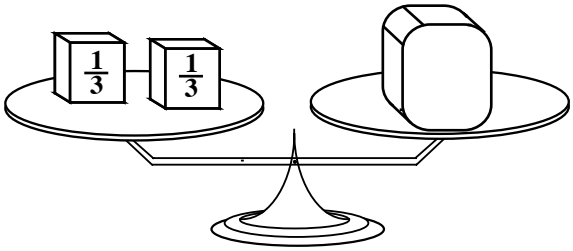
8.



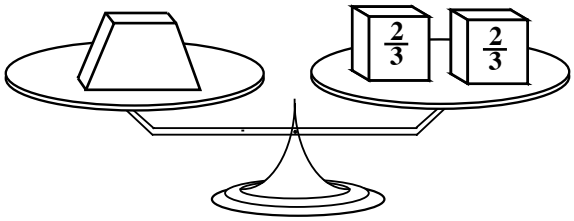
Copyright © 2002 Mathematics Learning

Fraction Balance # 4

1.

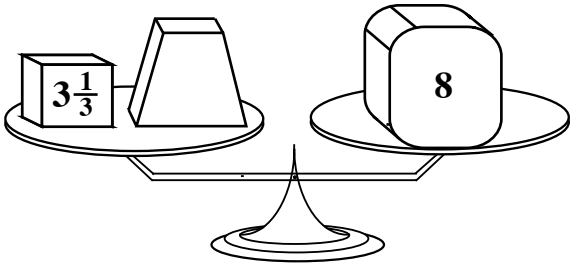


2.

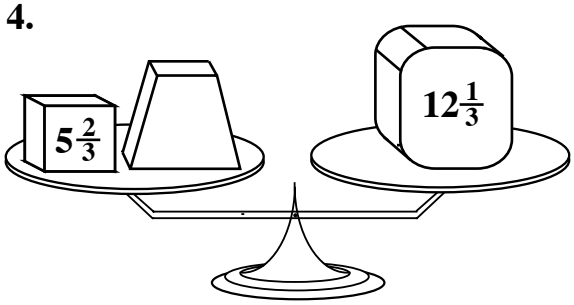


Boxes that are the same size and shape must have the same number in them.

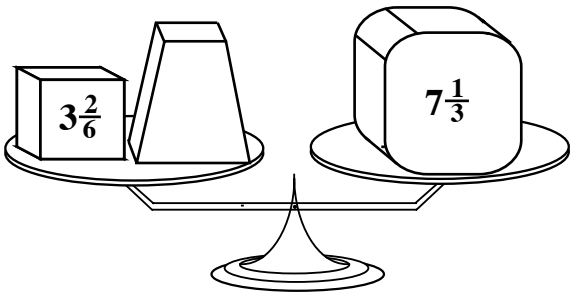
3.



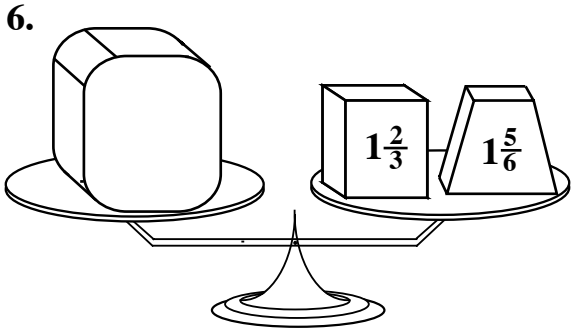
4.



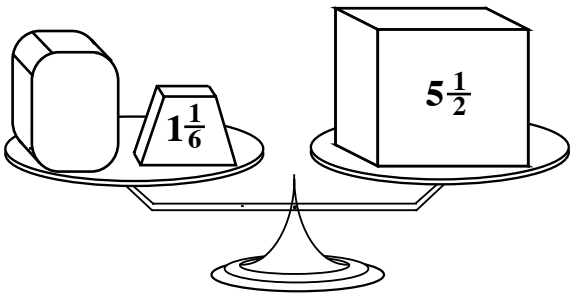
5.



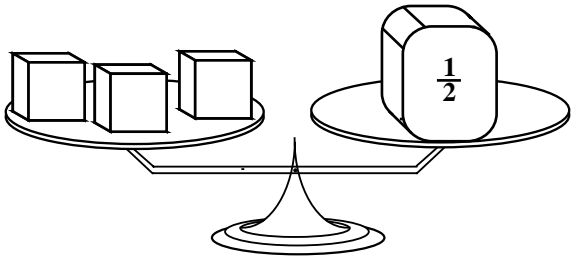
6.



7.



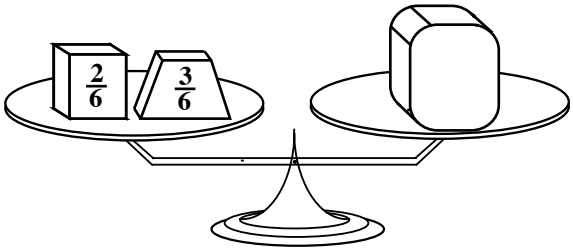
8.



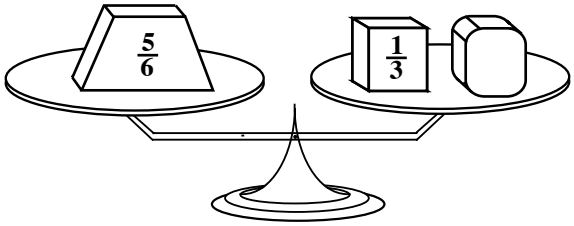
Copyright © 2002 Mathematics Learning

Fraction Balance # 5

1.

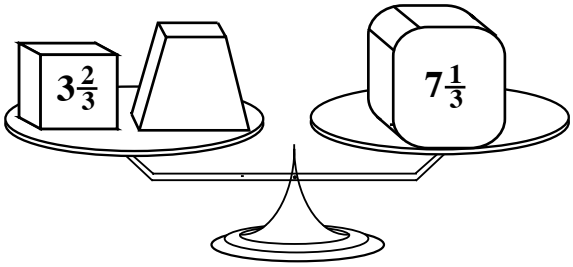


2.

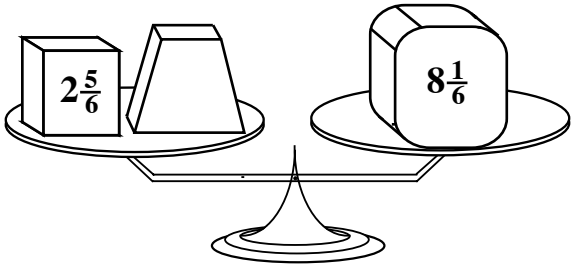


Boxes that are the same size and shape must have the same number in them.

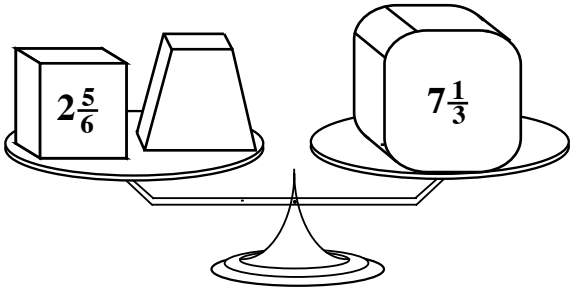
3.



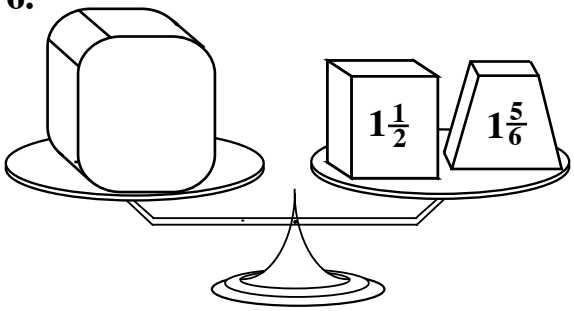
4.



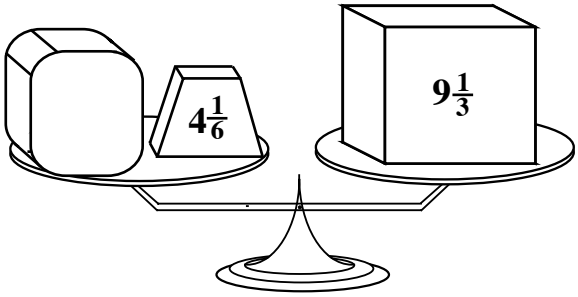
5.



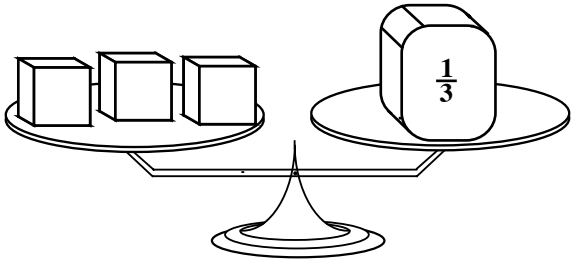
6.



7.



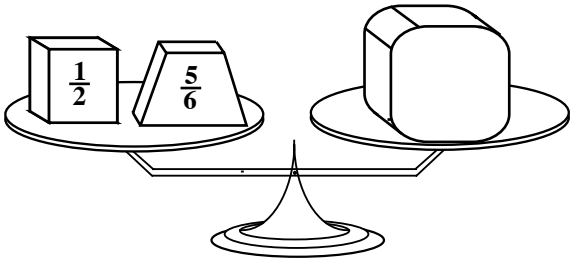
8.



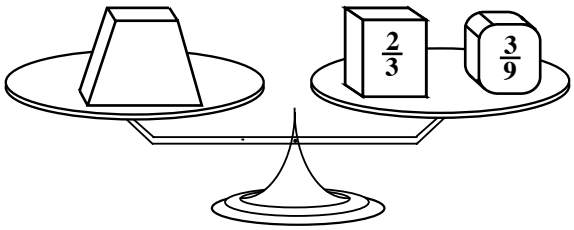
Copyright © 2002 Mathematics Learning

Fraction Balance # 6

1.

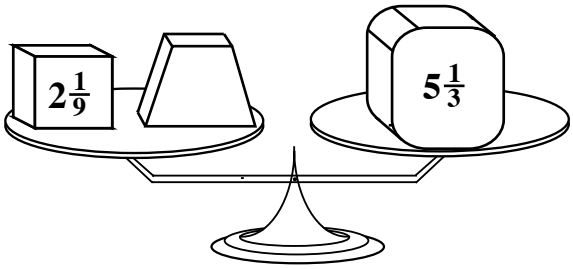


2.

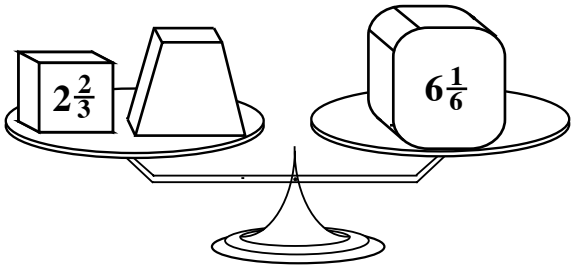


Boxes that are the same size and shape must have the same number in them.

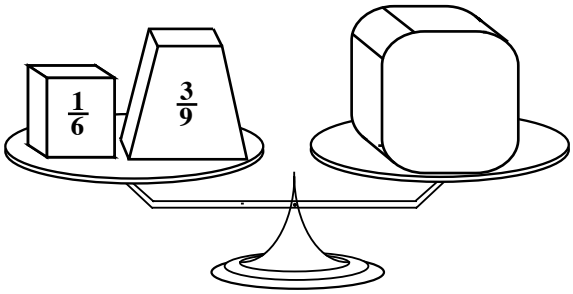
3.



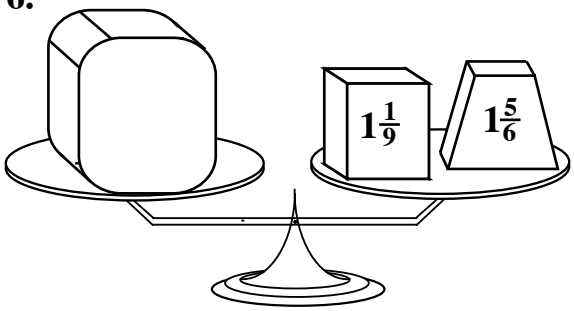
4.



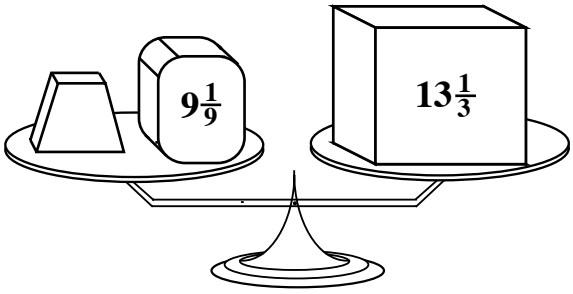
5.



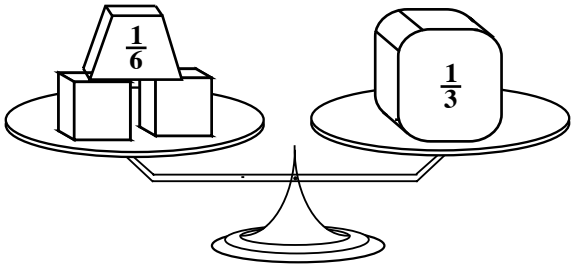
6.



7.

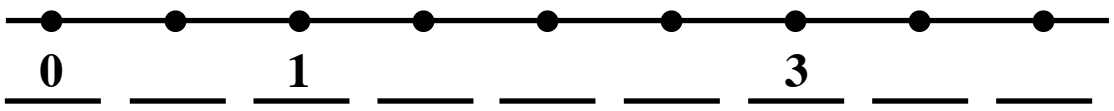


8.

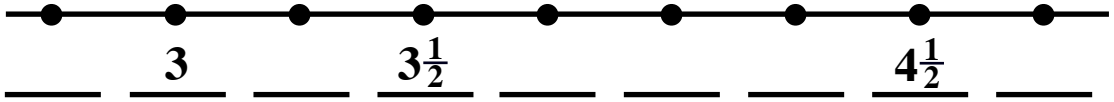


Copyright © 2002 Mathematics Learning

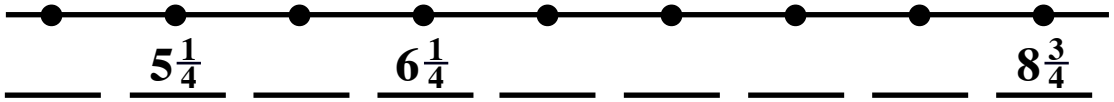
Fraction Sequence # 1

1) 

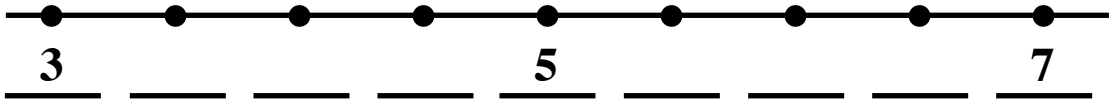
What is the pattern? _____

2) 

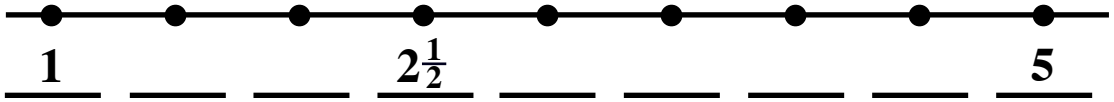
What is the pattern? _____

3) 

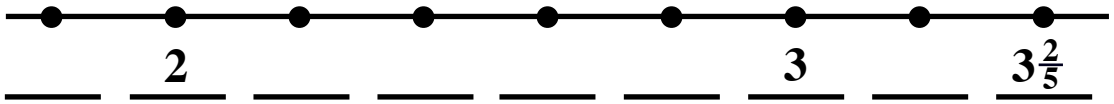
What is the pattern? _____

4) 

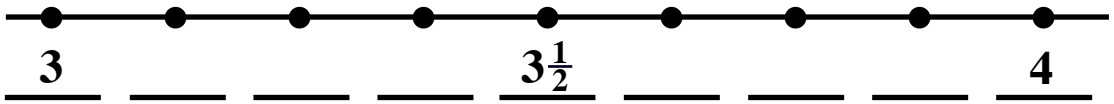
What is the pattern? _____

5) 

What is the pattern? _____

6) 

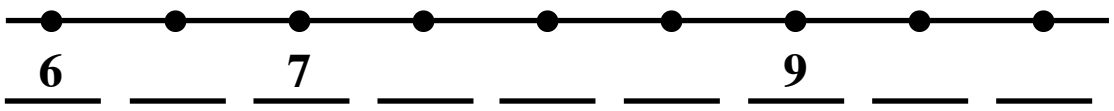
What is the pattern? _____

7) 

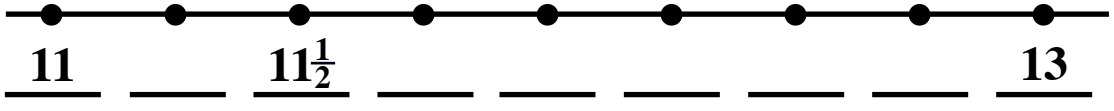
What is the pattern? _____

Copyright © 2002 Mathematics Learning

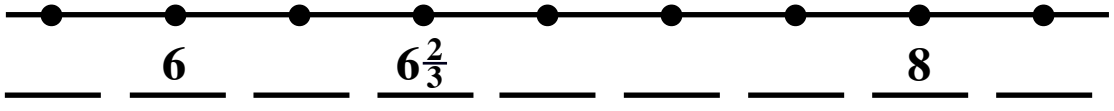
Fraction Sequence # 2

1) 

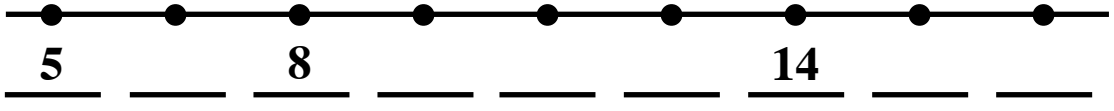
What is the pattern? _____

2) 

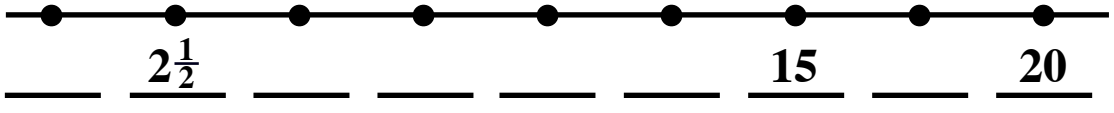
What is the pattern? _____

3) 

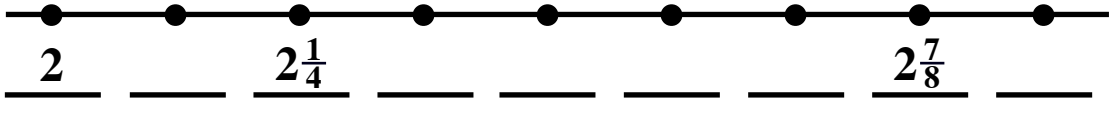
What is the pattern? _____

4) 

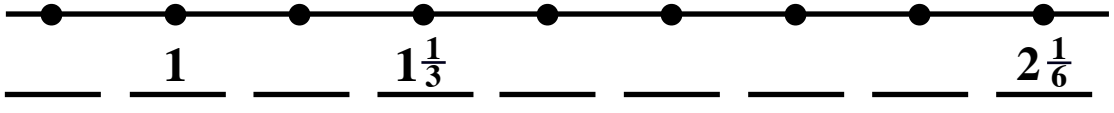
What is the pattern? _____

5) 

What is the pattern? _____

6) 

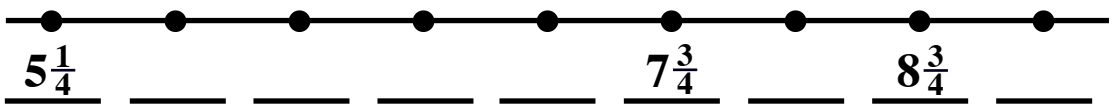
What is the pattern? _____

7) 

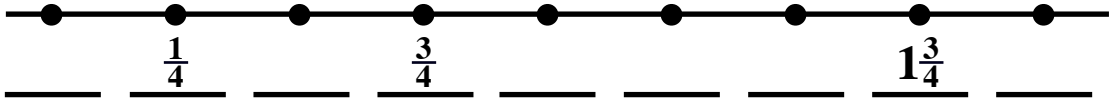
What is the pattern? _____

Copyright © 2002 Mathematics Learning

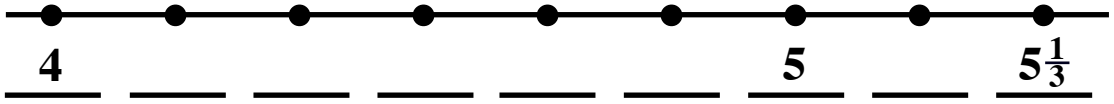
Fraction Sequence # 3

1) 

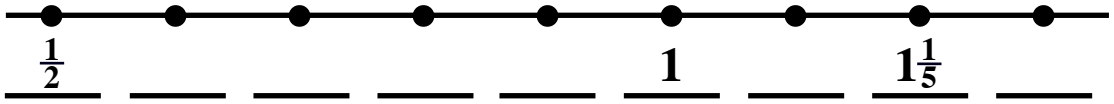
What is the pattern? _____

2) 

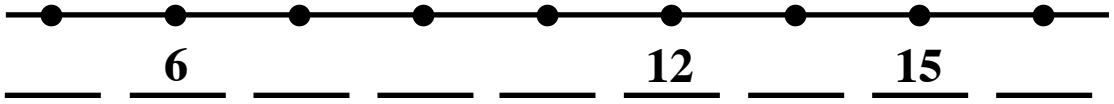
What is the pattern? _____

3) 

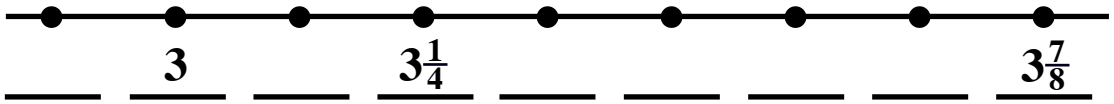
What is the pattern? _____

4) 

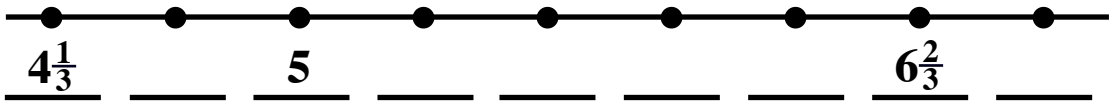
What is the pattern? _____

5) 

What is the pattern? _____

6) 

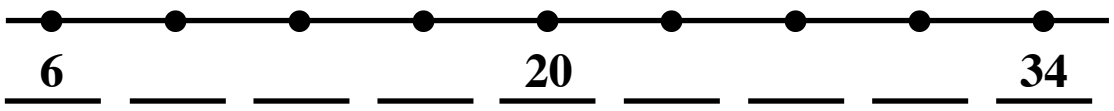
What is the pattern? _____

7) 

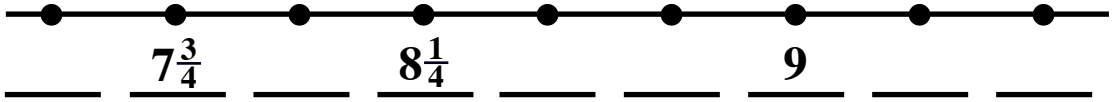
What is the pattern? _____

Copyright © 2002 Mathematics Learning

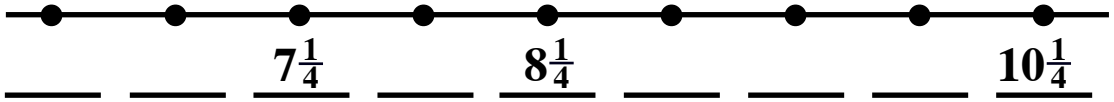
Fraction Sequence # 4

1) 

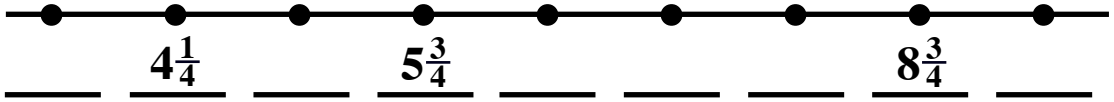
What is the pattern? _____

2) 

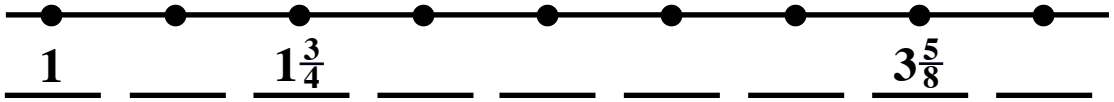
What is the pattern? _____

3) 

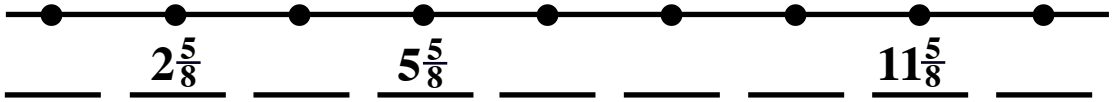
What is the pattern? _____

4) 

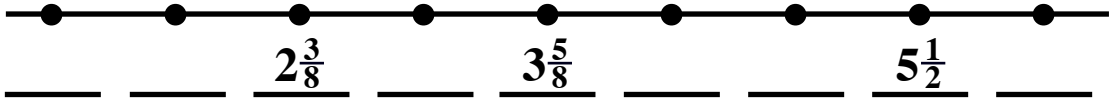
What is the pattern? _____

5) 

What is the pattern? _____

6) 

What is the pattern? _____

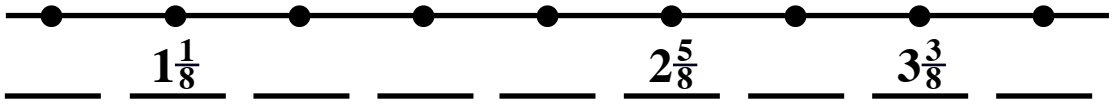
7) 

What is the pattern? _____

Copyright © 2002 Mathematics Learning

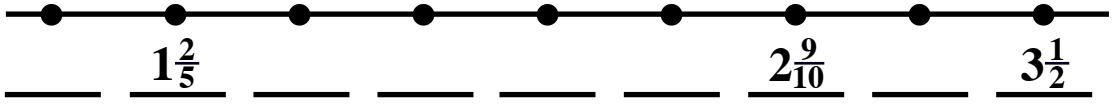
Fraction Sequence # 5

1)



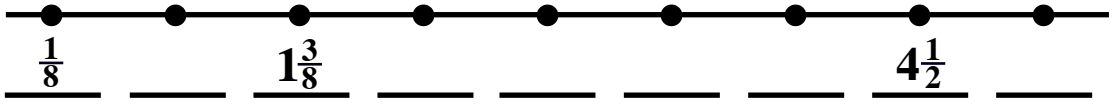
What is the pattern? _____

2)



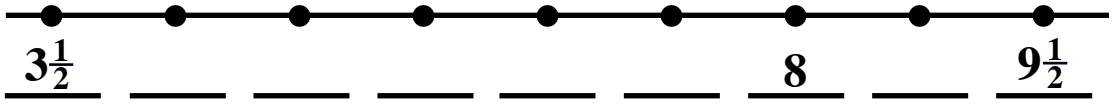
What is the pattern? _____

3)



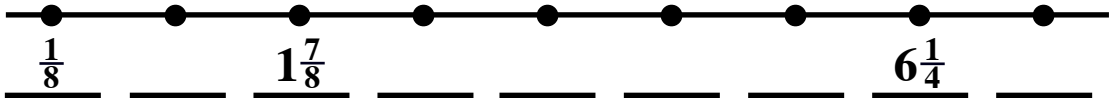
What is the pattern? _____

4)



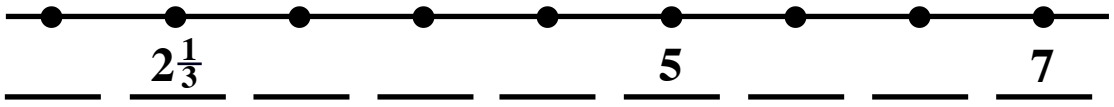
What is the pattern? _____

5)



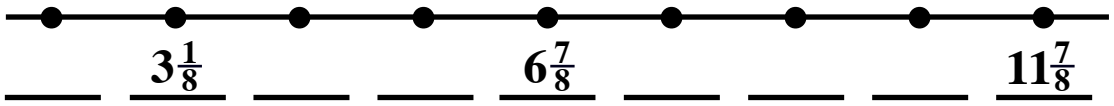
What is the pattern? _____

6)



What is the pattern? _____

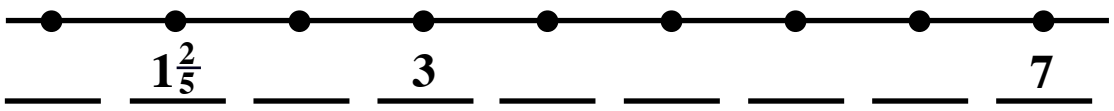
7)



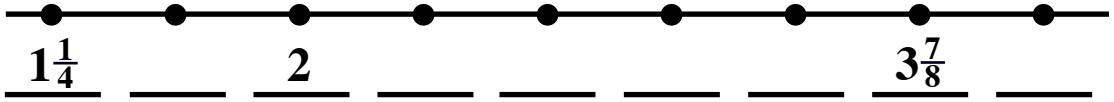
What is the pattern? _____

Copyright © 2002 Mathematics Learning

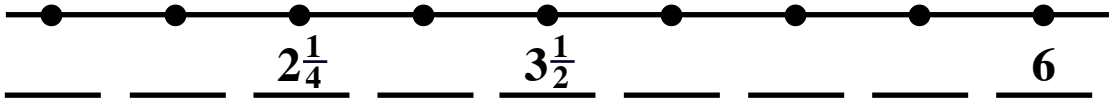
Fraction Sequence # 6

1) 

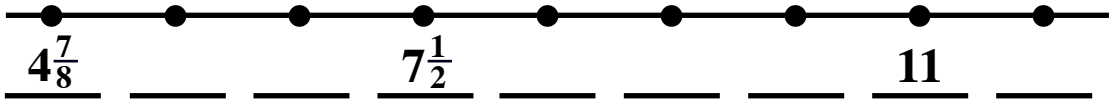
What is the pattern? _____

2) 

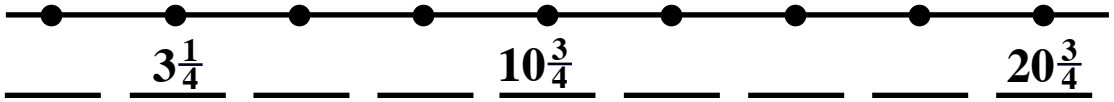
What is the pattern? _____

3) 

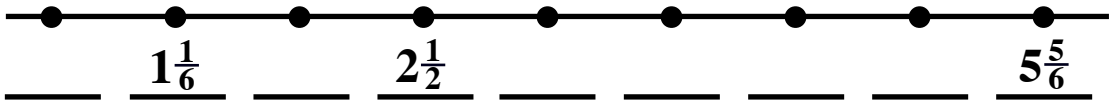
What is the pattern? _____

4) 

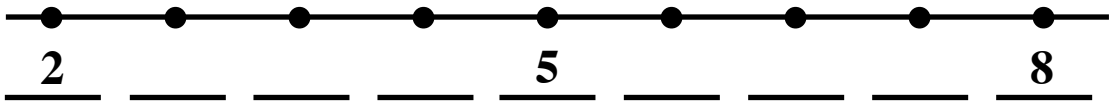
What is the pattern? _____

5) 

What is the pattern? _____

6) 

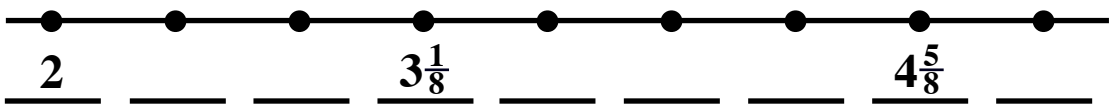
What is the pattern? _____

7) 

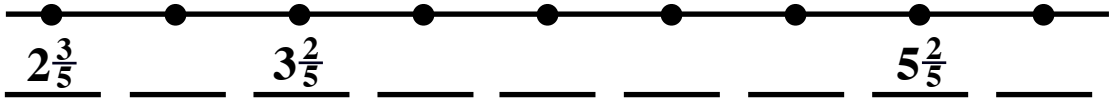
What is the pattern? _____

Copyright © 2002 Mathematics Learning

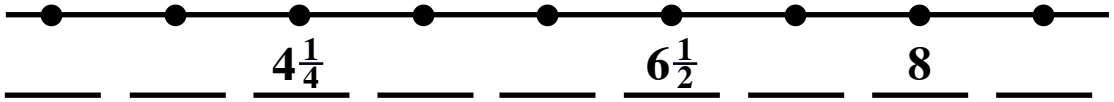
Fraction Sequence # 7

1) 

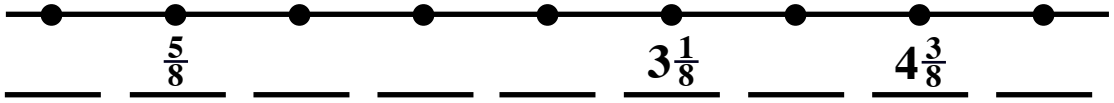
What is the pattern? _____

2) 

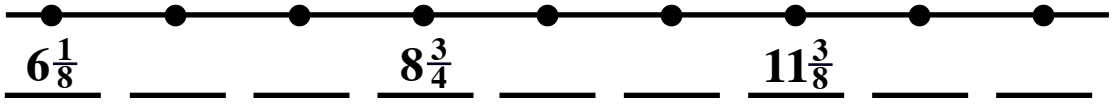
What is the pattern? _____

3) 

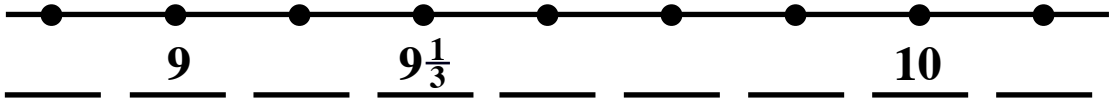
What is the pattern? _____

4) 

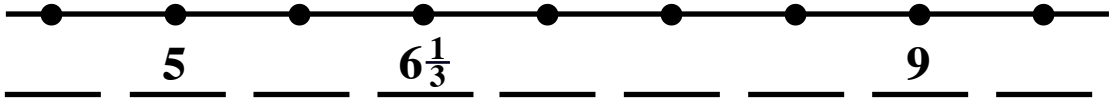
What is the pattern? _____

5) 

What is the pattern? _____

6) 

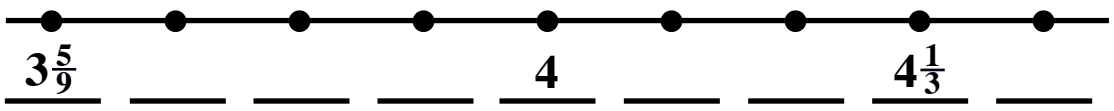
What is the pattern? _____

7) 

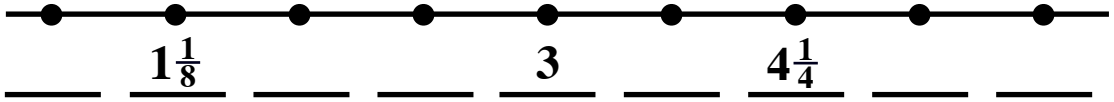
What is the pattern? _____

Copyright © 2002 Mathematics Learning

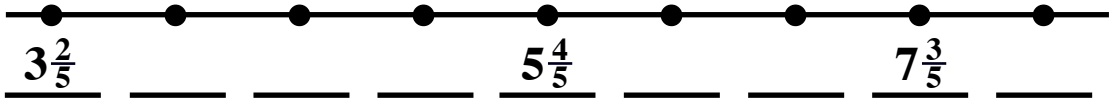
Fraction Sequence # 8

1) 

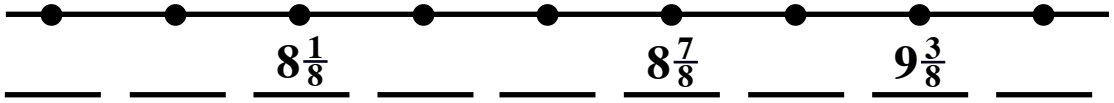
What is the pattern? _____

2) 

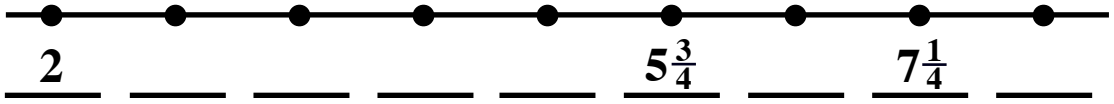
What is the pattern? _____

3) 

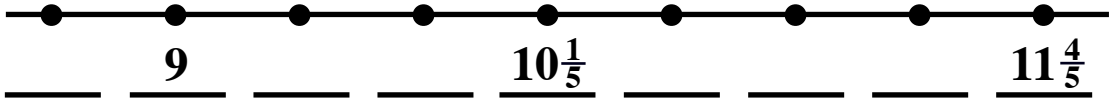
What is the pattern? _____

4) 

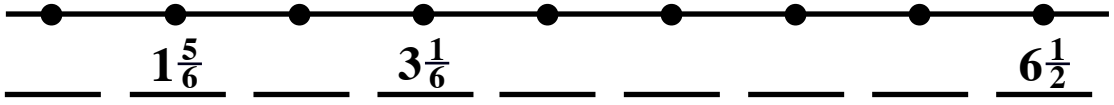
What is the pattern? _____

5) 

What is the pattern? _____

6) 

What is the pattern? _____

7) 

What is the pattern? _____

Copyright © 2002 Mathematics Learning

Fraction Benchmark # 1

1.

$\frac{2}{2}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{5}$	$\frac{1}{6}$	$\frac{1}{10}$
60						

a) $\frac{6}{6}$ x 60 = _____ b) $\frac{2}{3}$ of 60 is _____

c) $\frac{2}{4}$ x 60 = _____ d) $\frac{3}{4}$ of 60 is _____

e) $\frac{2}{5}$ x 60 = _____ f) $\frac{3}{5}$ of 60 is _____

g) $\frac{4}{5}$ x 60 = _____ h) $\frac{5}{6}$ of 60 is _____

i) $\frac{3}{10}$ x 60 = _____ j) $\frac{7}{10}$ of 60 is _____

Make up two of your own.

k) _____ x 60 = _____ l) _____ of 60 is _____

2.

$\frac{10}{10}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{5}$	$\frac{1}{6}$	$\frac{1}{10}$	$\frac{1}{30}$
30						

a) $\frac{2}{3}$ of 30 = _____ b) $\frac{2}{5}$ x 30 is _____

c) $\frac{3}{5}$ of 30 = _____ d) $\frac{4}{5}$ x 30 is _____

e) $\frac{4}{6}$ of 30 = _____ f) $\frac{5}{6}$ x 30 is _____

g) $\frac{3}{10}$ of 30 = _____ h) $\frac{7}{10}$ x 30 is _____

i) $\frac{7}{30}$ of 30 = _____ j) $\frac{9}{30}$ x 30 is _____

Make up two of your own.

k) _____ of 30 = _____ l) _____ x 30 is _____

Copyright © 2002 Mathematics Learning

Fraction Benchmark # 2

1.

$\frac{8}{8}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{6}$	$\frac{1}{8}$	$\frac{1}{12}$
24						

a) $\frac{3}{2}$ x 24 = _____ b) $\frac{2}{3}$ of 24 is _____

c) $\frac{3}{8}$ x 24 = _____ d) $\frac{3}{4}$ of 24 is _____

e) $\frac{5}{8}$ x 24 = _____ f) $\frac{7}{8}$ of 24 is _____

g) $\frac{5}{6}$ x 24 = _____ h) $1\frac{1}{4}$ of 24 is _____

i) $\frac{7}{12}$ x 24 = _____ j) $\frac{11}{12}$ of 24 is _____

Make up two of your own.

k) _____ x 24 = _____ l) _____ of 24 is _____

2.

$\frac{4}{4}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{6}$	$\frac{1}{8}$	$\frac{1}{16}$
16						

a) $\frac{2}{3}$ of 16 = _____ b) $\frac{5}{8}$ x 16 is _____

c) $\frac{3}{4}$ of 16 = _____ d) $\frac{12}{16}$ x 16 is _____

e) $\frac{3}{8}$ of 16 = _____ f) $\frac{7}{8}$ x 16 is _____

g) $\frac{12}{8}$ of 16 = _____ h) $1\frac{1}{2}$ x 16 is _____

i) $\frac{7}{16}$ of 16 = _____ j) $1\frac{3}{8}$ x 16 is _____

Make up two of your own.

k) _____ of 16 = _____ l) _____ x 16 is _____

Copyright © 2002 Mathematics Learning

Fraction Benchmark # 3

1.

$\frac{7}{7}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{6}$	$\frac{1}{7}$	$\frac{1}{8}$
42						

a) $\frac{2}{3}$ x 42 = _____ b) $\frac{3}{4}$ of 42 is _____

c) $\frac{5}{6}$ x 42 = _____ d) $\frac{2}{7}$ of 42 is _____

e) $\frac{3}{7}$ x 42 = _____ f) $\frac{4}{7}$ of 42 is _____

g) $2\frac{1}{3}$ x 42 = _____ h) $\frac{3}{8}$ of 42 is _____

i) $\frac{5}{8}$ x 42 = _____ j) $\frac{7}{6}$ of 42 is _____

Make up two of your own.

k) _____ x 42 = _____ l) _____ of 42 is _____

2.

$\frac{4}{4}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{5}$
10				

a) $\frac{2}{3}$ of 10 = _____ b) $\frac{3}{4}$ x 10 is _____

c) $\frac{2}{5}$ of 10 = _____ d) $\frac{3}{5}$ x 10 is _____

e) $5\frac{1}{4}$ of 10 = _____ f) $\frac{3}{8}$ x 10 is _____

g) $\frac{5}{8}$ of 10 = _____ h) $\frac{7}{8}$ x 10 is _____

i) $1\frac{1}{2}$ of 10 = _____ j) $\frac{15}{10}$ x 10 is _____

Make up two of your own.

k) _____ of 10 = _____ l) _____ x 10 is _____

Copyright © 2002 Mathematics Learning

Fraction Benchmark # 4

1.

$\frac{15}{15}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{5}$	$\frac{1}{6}$	$\frac{1}{15}$
300						

a) $\frac{2}{3}$ x 300 = _____ b) $\frac{3}{4}$ of 300 is _____

c) $\frac{2}{5}$ x 300 = _____ d) $\frac{3}{5}$ of 300 is _____

e) $2\frac{1}{3}$ x 300 = _____ f) $\frac{5}{6}$ of 300 is _____

g) $\frac{4}{15}$ x 300 = _____ h) $\frac{7}{15}$ of 300 is _____

i) $\frac{14}{15}$ x 300 = _____ j) $\frac{16}{5}$ of 300 is _____

Make up two of your own.

k) _____ x 300 = _____ l) _____ of 300 is _____

2.

$\frac{6}{6}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{6}$	$\frac{1}{8}$	$\frac{1}{12}$
156						

a) $\frac{2}{3}$ of 156 = _____ b) $\frac{3}{4}$ x 156 is _____

c) $\frac{5}{6}$ of 156 = _____ d) $\frac{3}{8}$ x 156 is _____

e) $\frac{5}{8}$ of 156 = _____ f) $\frac{7}{8}$ x 156 is _____

g) $\frac{5}{12}$ of 156 = _____ h) $\frac{7}{12}$ x 156 is _____

i) $\frac{11}{12}$ of 156 = _____ j) $\frac{4}{3}$ x 156 is _____

Make up two of your own.

k) _____ of 156 = _____ l) _____ x 156 is _____

Copyright © 2002 Mathematics Learning

Fraction Benchmark # 5

1.

$\frac{5}{5}$	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{5}$	$\frac{1}{10}$	$\frac{1}{20}$	$\frac{1}{100}$
100						

a) $\frac{3}{4}$ x 100 = _____ b) $\frac{2}{5}$ of 100 is _____

c) $\frac{3}{5}$ x 100 = _____ d) $\frac{4}{5}$ of 100 is _____

e) $\frac{3}{10}$ x 100 = _____ f) $\frac{7}{10}$ of 100 is _____

g) $\frac{3}{20}$ x 100 = _____ h) $6\frac{3}{4}$ of 100 is _____

i) $\frac{9}{20}$ x 100 = _____ j) $\frac{19}{20}$ of 100 is _____

Make up two of your own.

k) _____ x 100 = _____ l) _____ of 100 is _____

2.

$\frac{4}{4}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{5}$	$\frac{1}{6}$	$\frac{1}{12}$
180						

a) $\frac{2}{3}$ of 180 = _____ b) $\frac{3}{4}$ x 180 is _____

c) $\frac{2}{5}$ of 180 = _____ d) $\frac{3}{5}$ x 180 is _____

e) $\frac{4}{5}$ of 180 = _____ f) $\frac{5}{6}$ x 180 is _____

g) $\frac{5}{12}$ of 180 = _____ h) $\frac{7}{12}$ x 180 is _____

i) $\frac{11}{12}$ of 180 = _____ j) $\frac{15}{12}$ x 180 is _____

Make up two of your own.

k) _____ of 180 = _____ l) _____ x 180 is _____

Copyright © 2002 Mathematics Learning

Fraction Benchmark # 6

1.

$\frac{7}{7}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{6}$	$\frac{1}{8}$	$\frac{1}{16}$
96						

a) $\frac{2}{3}$ x 96 = _____ b) $\frac{3}{4}$ of 96 is _____

c) $\frac{5}{6}$ x 96 = _____ d) $\frac{3}{8}$ of 96 is _____

e) $\frac{5}{8}$ x 96 = _____ f) $\frac{7}{8}$ of 96 is _____

g) $\frac{5}{16}$ x 96 = _____ h) $\frac{7}{16}$ of 96 is _____

i) $\frac{15}{16}$ x 96 = _____ j) $\frac{17}{8}$ of 96 is _____

Make up two of your own.

k) _____ x 96 = _____ l) _____ of 96 is _____

2.

$\frac{9}{9}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{6}$	$\frac{1}{7}$	$\frac{1}{9}$
126						

a) $\frac{2}{3}$ of 126 = _____ b) $\frac{3}{4}$ x 126 is _____

c) $\frac{5}{6}$ of 126 = _____ d) $\frac{2}{7}$ x 126 is _____

e) $\frac{3}{7}$ of 126 = _____ f) $\frac{4}{7}$ x 126 is _____

g) $\frac{6}{7}$ of 126 = _____ h) $\frac{2}{9}$ x 126 is _____

i) $\frac{8}{9}$ of 126 = _____ j) $\frac{10}{9}$ x 126 is _____

Make up two of your own.

k) _____ of 126 = _____ l) _____ x 126 is _____

Copyright © 2002 Mathematics Learning

Fraction Benchmark # 7

1.

$\frac{12}{12}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{6}$	$\frac{1}{8}$	$\frac{1}{12}$
144						

a) $\frac{2}{3}$ x 144 = _____ b) $\frac{3}{4}$ of 144 is _____

c) $\frac{5}{6}$ x 144 = _____ d) $\frac{3}{8}$ of 144 is _____

e) $\frac{5}{8}$ x 144 = _____ f) $\frac{7}{8}$ of 144 is _____

g) $\frac{5}{12}$ x 144 = _____ h) $\frac{7}{12}$ of 144 is _____

i) $\frac{11}{12}$ x 144 = _____ j) $\frac{10}{6}$ of 144 is _____

Make up two of your own.

k) _____ x 144 = _____ l) _____ of 144 is _____

2.

$\frac{3}{3}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{6}$	$\frac{1}{8}$	$\frac{1}{12}$
6						

a) $\frac{2}{3}$ of 6 = _____ b) $\frac{3}{4}$ x 6 is _____

c) $\frac{5}{6}$ of 6 = _____ d) $\frac{3}{8}$ x 6 is _____

e) $\frac{5}{8}$ of 6 = _____ f) $\frac{7}{8}$ x 6 is _____

g) $\frac{5}{12}$ of 6 = _____ h) $1\frac{1}{4}$ x 6 is _____

i) $\frac{11}{12}$ of 6 = _____ j) $\frac{10}{3}$ x 6 is _____

Make up two of your own.

k) _____ of 6 = _____ l) _____ x 6 is _____

Copyright © 2002 Mathematics Learning

Fraction Benchmark # 8

1.

$\frac{5}{5}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{5}$	$\frac{1}{8}$	$\frac{1}{10}$
200						

a) $\frac{2}{3}$ x 200 = _____ b) $\frac{3}{4}$ of 200 is _____

c) $\frac{2}{5}$ x 200 = _____ d) $\frac{3}{5}$ of 200 is _____

e) $2\frac{2}{5}$ x 200 = _____ f) $\frac{3}{8}$ of 200 is _____

g) $\frac{5}{8}$ x 200 = _____ h) $\frac{7}{8}$ of 200 is _____

i) $\frac{9}{10}$ x 200 = _____ j) $\frac{24}{5}$ of 200 is _____

Make up two of your own.

k) _____ x 200 = _____ l) _____ of 200 is _____

2.

$\frac{8}{8}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{5}$	$\frac{1}{6}$	$\frac{1}{8}$
240						

a) $\frac{2}{3}$ of 240 = _____ b) $\frac{3}{4}$ x 240 is _____

c) $\frac{2}{5}$ of 240 = _____ d) $\frac{3}{5}$ x 240 is _____

e) $\frac{4}{5}$ of 240 = _____ f) $\frac{5}{6}$ x 240 is _____

g) $\frac{3}{8}$ of 240 = _____ h) $1\frac{5}{8}$ x 240 is _____

i) $\frac{7}{8}$ of 240 = _____ j) $\frac{5}{4}$ x 240 is _____

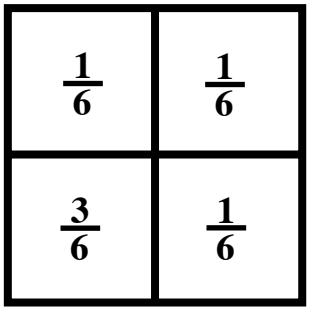
Make up two of your own.

k) _____ of 240 = _____ l) _____ x 240 is _____

Copyright © 2002 Mathematics Learning

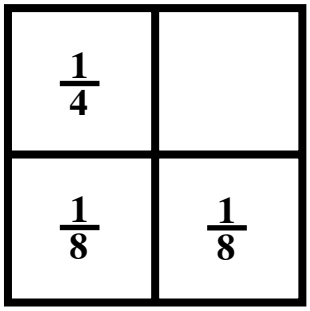
Fraction Math Squares # 1

1.



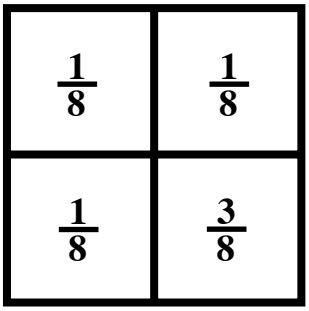
_____

2.



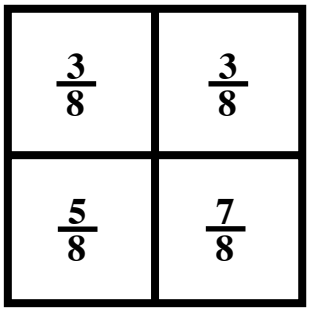
$\frac{3}{4}$

3.



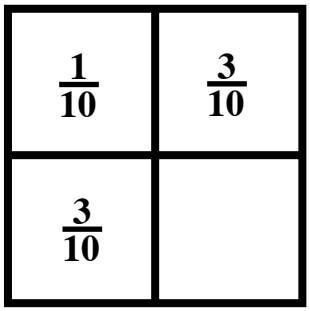
_____

4.



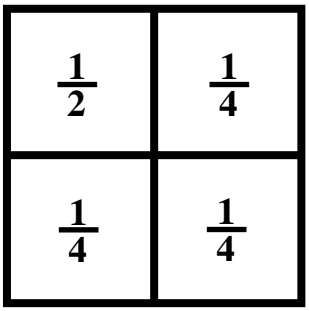
_____

5.



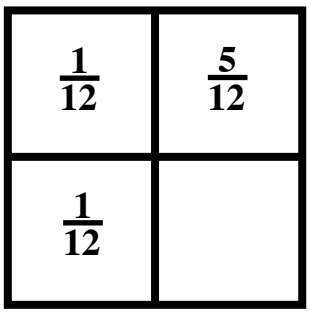
1

6.



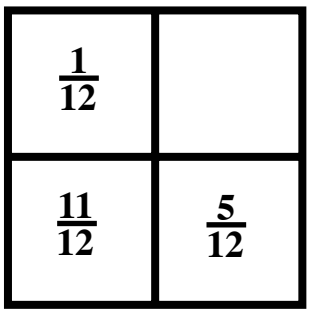
_____

7.



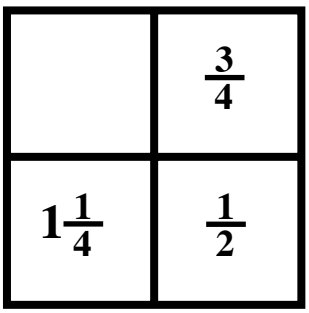
$1\frac{5}{12}$

8.



$1\frac{7}{12}$

9.

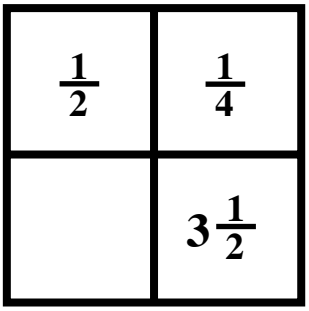


3

Copyright © 2002 Mathematics Learning

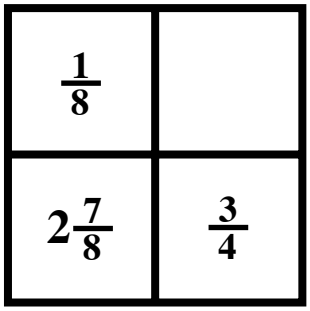
Fraction Math Squares # 2

1.



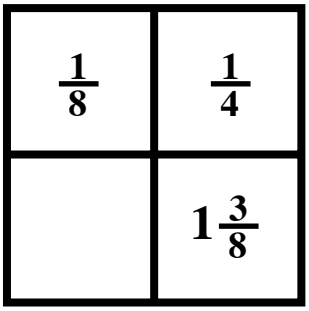
5

2.



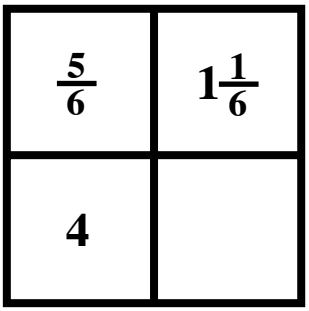
6

3.



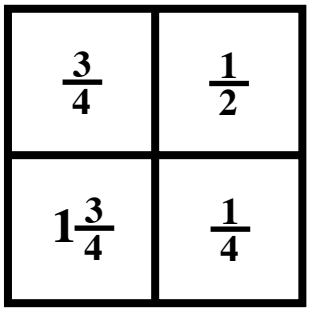
4

4.

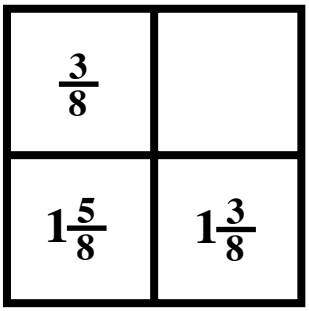


7 1/2

5.

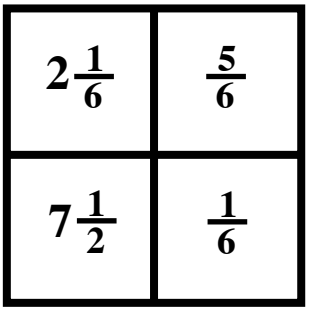


6.

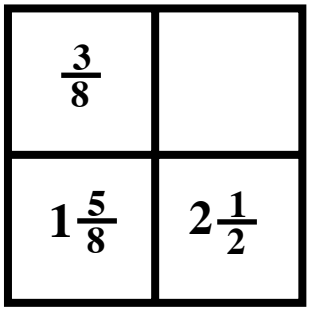


5 5/8

7.

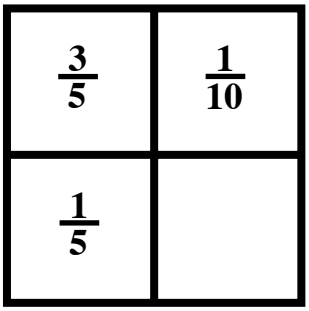


8.



5 5/8

9.



1 7/10

Copyright © 2002 Mathematics Learning

Fraction Math Squares # 3

1.

$1\frac{1}{5}$	$1\frac{1}{5}$
$1\frac{1}{5}$	$1\frac{1}{5}$

_____

2.

$2\frac{1}{3}$	$3\frac{1}{3}$
$4\frac{2}{3}$	$5\frac{2}{3}$

_____

3.

	$4\frac{1}{3}$
$2\frac{1}{3}$	$6\frac{1}{3}$

$15\frac{2}{3}$

4.

$6\frac{1}{6}$	$1\frac{1}{6}$
$\frac{2}{3}$	

$9\frac{1}{3}$

5.

$\frac{1}{4}$	
$3\frac{1}{8}$	$2\frac{5}{8}$

$9\frac{1}{8}$

6.

$\frac{3}{8}$	$\frac{3}{4}$
	$\frac{1}{2}$

4

7.

$\frac{1}{8}$	$\frac{3}{4}$
	$\frac{3}{8}$

$3\frac{1}{2}$

8.

	$3\frac{3}{4}$
$1\frac{1}{2}$	$6\frac{3}{4}$

$17\frac{1}{4}$

9.

$5\frac{5}{8}$	$\frac{1}{4}$
$1\frac{1}{8}$	$1\frac{1}{2}$

_____

Copyright © 2002 Mathematics Learning

Fraction Math Squares # 4

1.

$\frac{1}{8}$	$\frac{3}{8}$
	$\frac{5}{8}$

$1\frac{7}{8}$

2.

$\frac{2}{3}$	$\frac{5}{6}$
	$\frac{1}{2}$

$6\frac{1}{4}$

3.

$4\frac{1}{5}$	$3\frac{3}{5}$
$1\frac{2}{5}$	$\frac{7}{10}$

_____

4.

	$1\frac{2}{3}$
$\frac{2}{3}$	$\frac{1}{6}$

$2\frac{5}{6}$

5.

$3\frac{1}{2}$	$3\frac{1}{8}$
$3\frac{1}{4}$	$2\frac{3}{8}$

_____

6.

$7\frac{5}{12}$	
$\frac{1}{12}$	$\frac{1}{4}$

$9\frac{1}{8}$

7.

$1\frac{1}{3}$	
$3\frac{2}{3}$	$\frac{5}{6}$

$6\frac{1}{2}$

8.

$2\frac{1}{8}$	$3\frac{5}{8}$
$1\frac{1}{4}$	

$12\frac{1}{2}$

9.

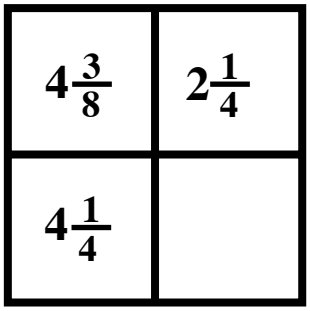
$3\frac{5}{6}$	$2\frac{1}{3}$
	$4\frac{1}{3}$

$12\frac{1}{4}$

Copyright © 2002 Mathematics Learning

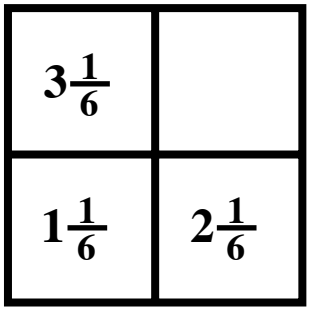
Fraction Math Squares # 5

1.



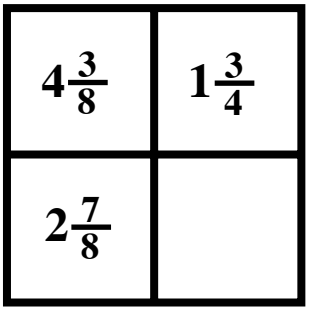
$12\frac{1}{8}$

2.



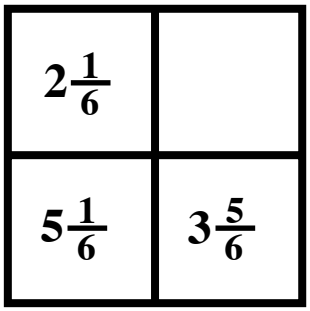
$9\frac{5}{6}$

3.



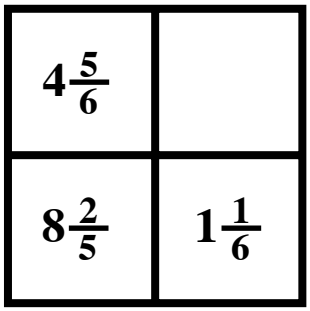
10

4.



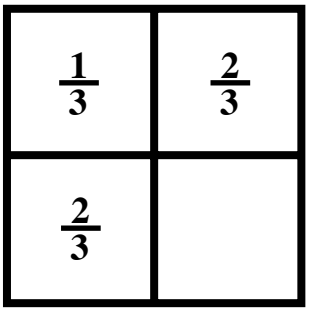
$14\frac{1}{2}$

5.



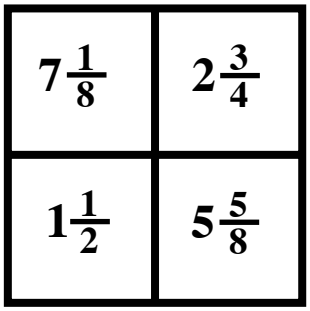
17

6.

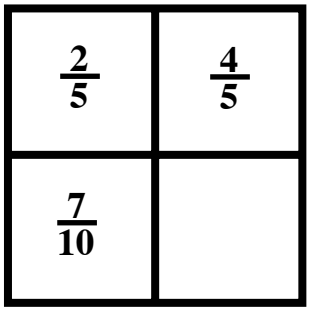


$4\frac{1}{2}$

7.

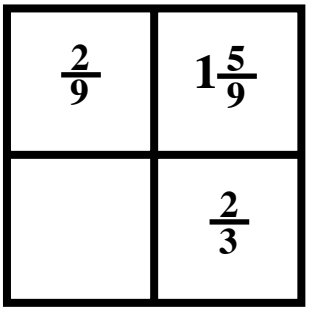


8.



$2\frac{1}{5}$

9.



3

Copyright © 2002 Mathematics Learning

Fraction Math Squares # 6

1.

	$\frac{1}{3}$
$1\frac{2}{3}$	$7\frac{1}{4}$

10

2.

$\frac{7}{12}$	$\frac{1}{3}$
$\frac{3}{4}$	

3

3.

$1\frac{1}{2}$	$5\frac{1}{3}$
$6\frac{3}{4}$	

15

4.

$1\frac{1}{2}$	$\frac{5}{6}$
$1\frac{2}{3}$	

$6\frac{1}{3}$

5.

$\frac{1}{8}$	$\frac{3}{4}$
	$\frac{5}{8}$

3

6.

$3\frac{5}{6}$	
$4\frac{5}{12}$	$9\frac{1}{12}$

$19\frac{2}{3}$

7.

	$3\frac{1}{2}$
$4\frac{1}{2}$	$5\frac{1}{2}$

$13\frac{7}{8}$

8.

	$2\frac{1}{4}$
$3\frac{3}{4}$	$1\frac{1}{6}$

$9\frac{1}{2}$

9.

$3\frac{3}{8}$	
$7\frac{1}{2}$	$5\frac{1}{8}$

$18\frac{3}{4}$

Copyright © 2002 Mathematics Learning

Fraction Math Squares # 7

1.

$2\frac{1}{2}$	$3\frac{1}{4}$
	$8\frac{1}{4}$

$17\frac{1}{8}$

2.

	$2\frac{3}{4}$
$1\frac{3}{4}$	$4\frac{3}{4}$

$10\frac{1}{2}$

3.

$2\frac{2}{3}$	
$1\frac{5}{6}$	$4\frac{5}{6}$

$12\frac{1}{2}$

4.

$8\frac{1}{9}$	$2\frac{1}{3}$
$4\frac{1}{3}$	$7\frac{7}{9}$

5.

$2\frac{2}{5}$	$1\frac{1}{5}$
$7\frac{2}{5}$	$8\frac{3}{4}$

6.

$1\frac{7}{8}$	$1\frac{5}{8}$
$\frac{1}{2}$	

24

7.

$4\frac{1}{8}$	
$1\frac{1}{4}$	$2\frac{5}{8}$

$17\frac{5}{6}$

8.

	$3\frac{3}{4}$
$5\frac{1}{2}$	$1\frac{1}{4}$

11

9.

	$6\frac{1}{2}$
$4\frac{3}{4}$	$2\frac{1}{4}$

15

Copyright © 2002 Mathematics Learning

Fraction Math Squares # 8

1.

$9\frac{1}{2}$	$4\frac{1}{8}$
$7\frac{3}{4}$	$2\frac{3}{8}$

_____

2.

$5\frac{3}{4}$	$2\frac{1}{4}$
$1\frac{1}{4}$	

$11\frac{1}{2}$

3.

$1\frac{5}{12}$	$2\frac{5}{12}$
$3\frac{5}{12}$	

$8\frac{1}{4}$

4.

$5\frac{3}{10}$	$2\frac{1}{10}$
$1\frac{1}{5}$	

$10\frac{1}{2}$

5.

$6\frac{1}{2}$	
$3\frac{1}{8}$	$4\frac{1}{2}$

$14\frac{1}{4}$

6.

	$2\frac{1}{2}$
$3\frac{1}{2}$	4

$11\frac{5}{6}$

7.

	$1\frac{1}{2}$
$7\frac{2}{3}$	$4\frac{5}{6}$

$15\frac{1}{3}$

8.

$4\frac{1}{4}$	$1\frac{3}{8}$
$3\frac{5}{8}$	

$9\frac{1}{2}$

9.

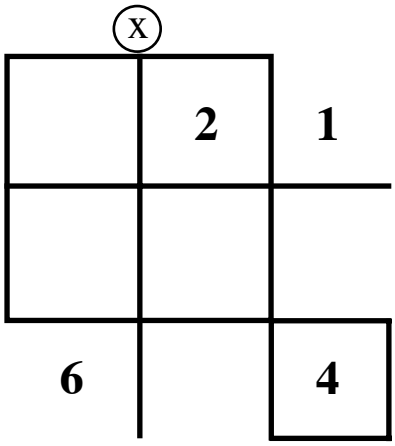
$4\frac{2}{9}$	$5\frac{8}{9}$
$3\frac{7}{9}$	$6\frac{5}{9}$

_____

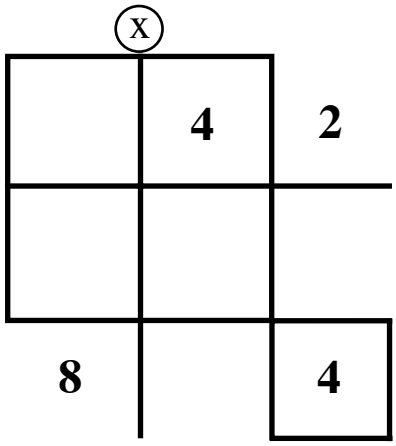
Copyright © 2002 Mathematics Learning

Fraction Two Ways # 1

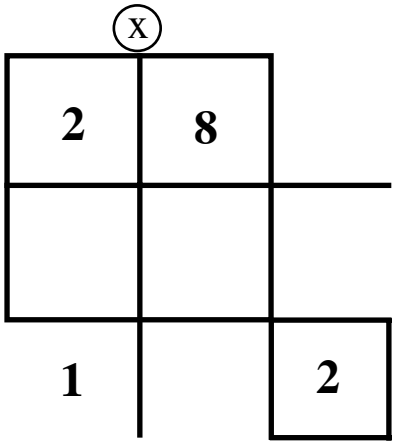
1.



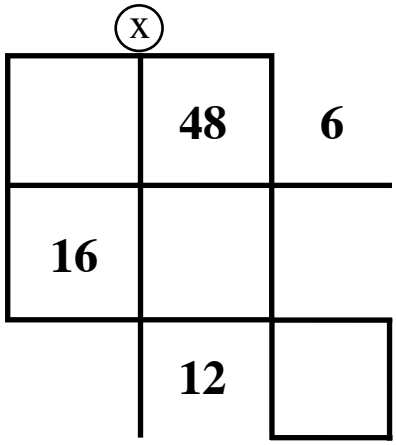
2.



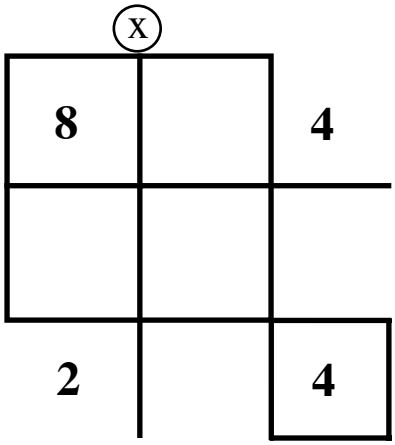
3.



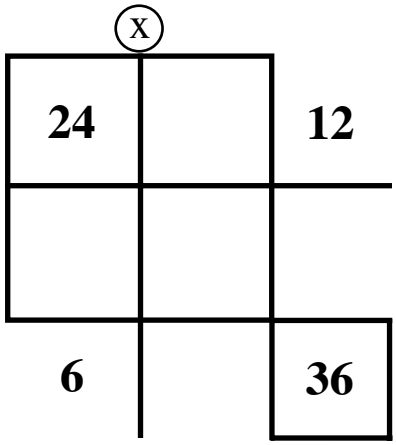
4.



5.



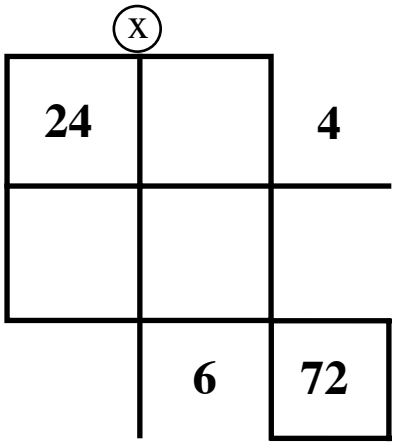
6.



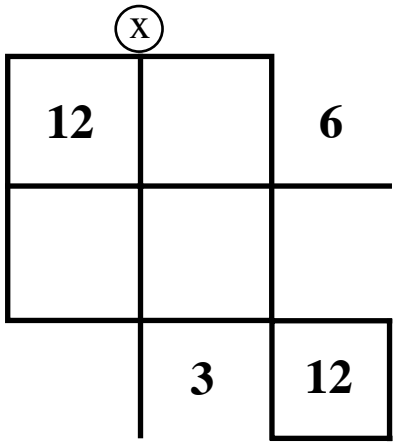
Copyright © 2002 Mathematics Learning

Fraction Two Ways # 2

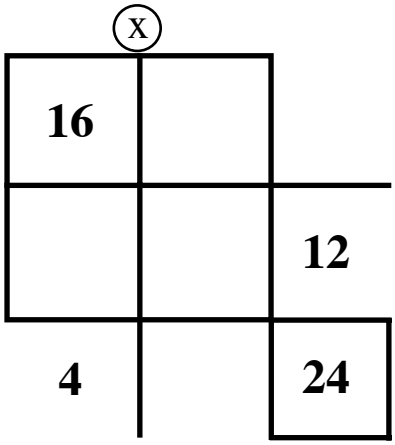
1.



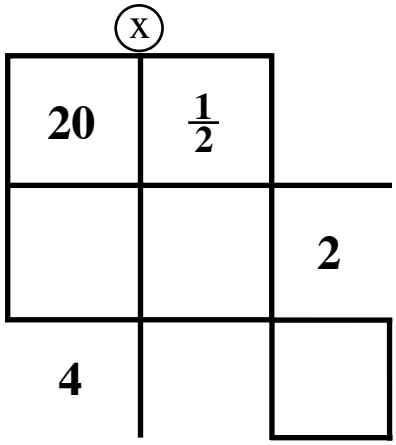
2.



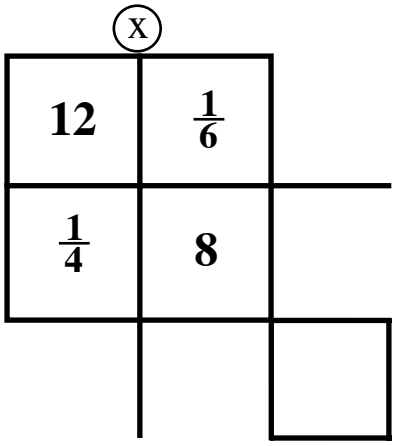
3.



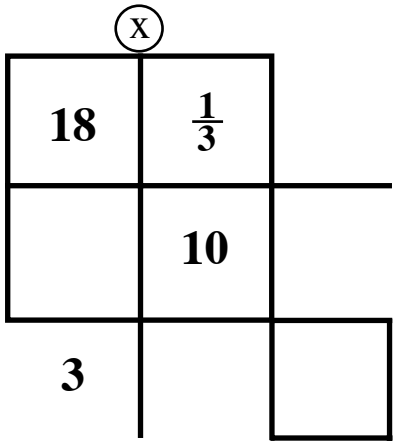
4.



5.



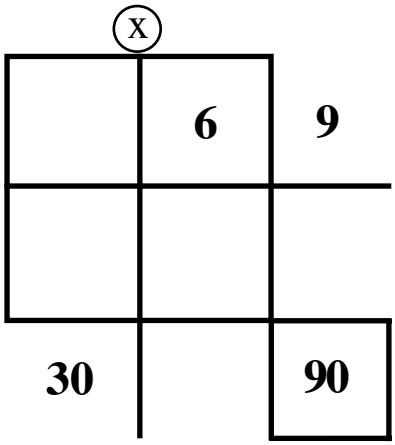
6.



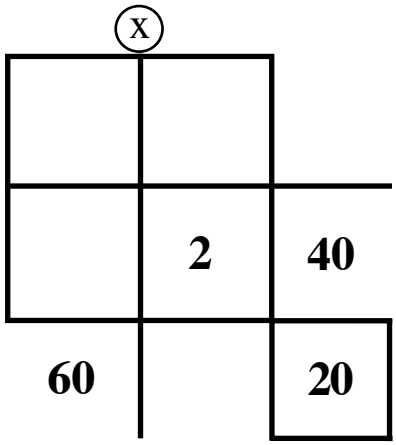
Copyright © 2002 Mathematics Learning

Fraction Two Ways # 3

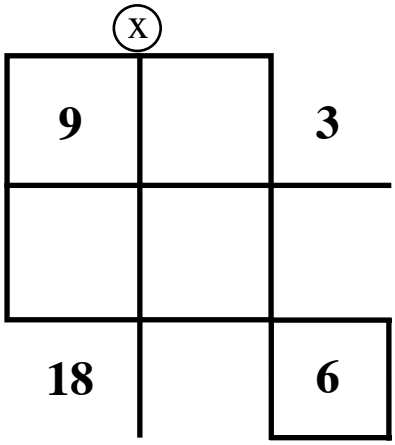
1.



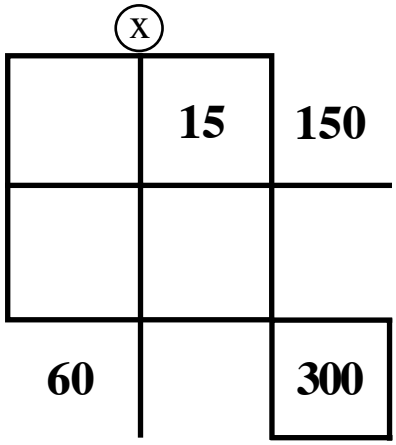
2.



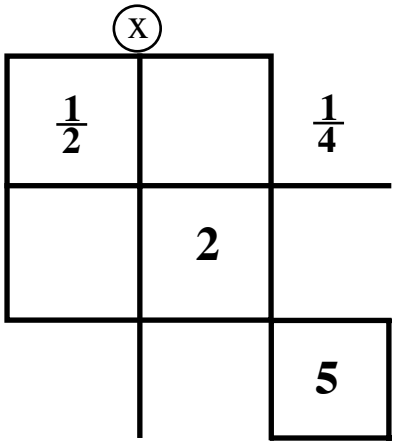
3.



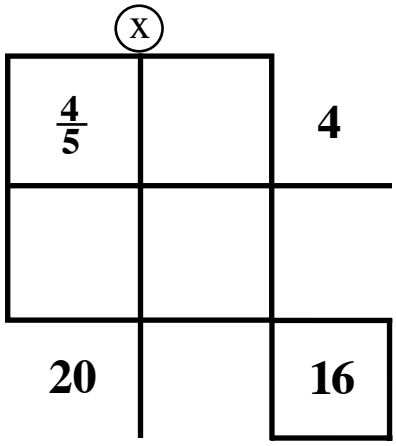
4.



5.



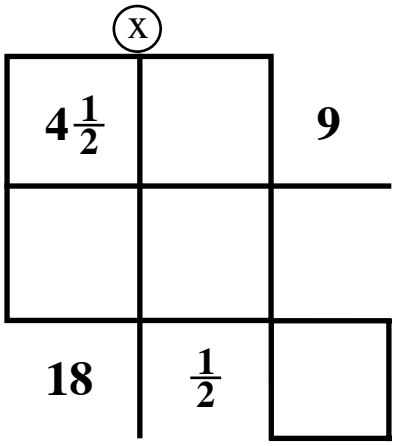
6.



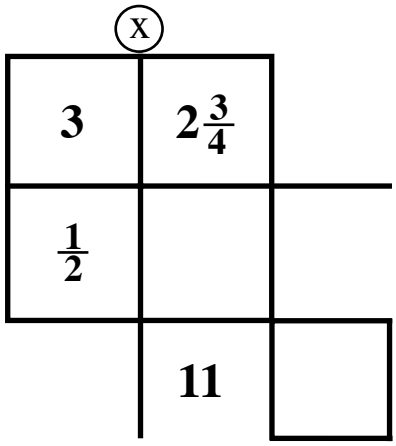
Copyright © 2002 Mathematics Learning

Fraction Two Ways # 4

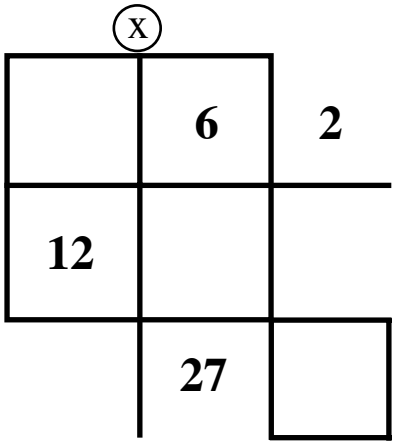
1.



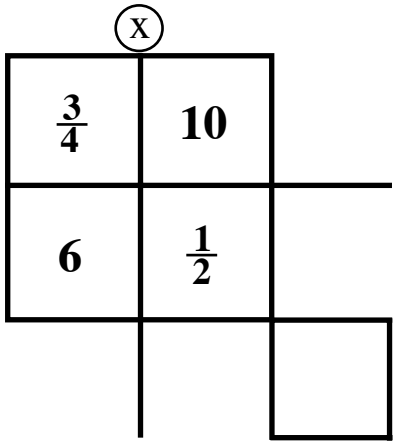
2.



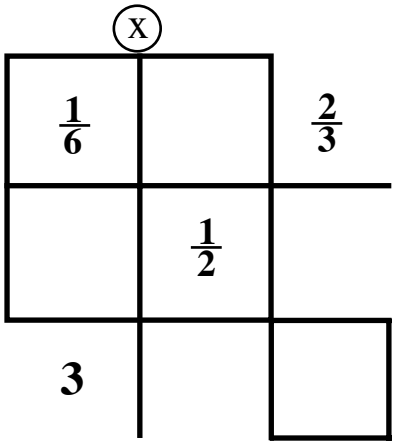
3.



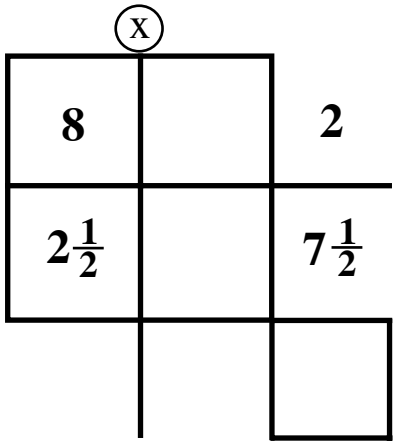
4.



5.



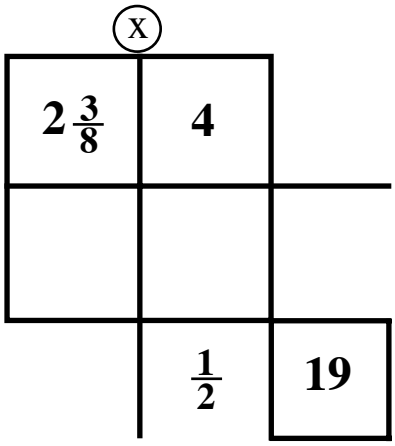
6.



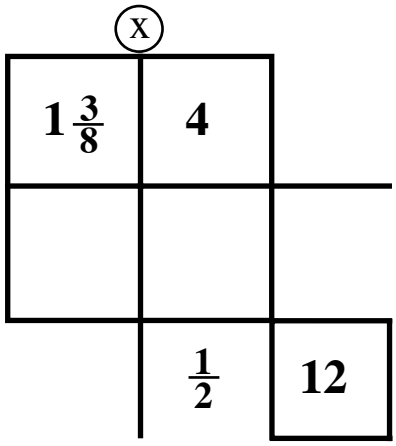
Copyright © 2002 Mathematics Learning

Fraction Two Ways # 5

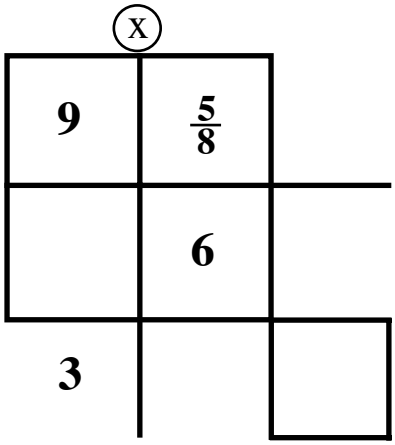
1.



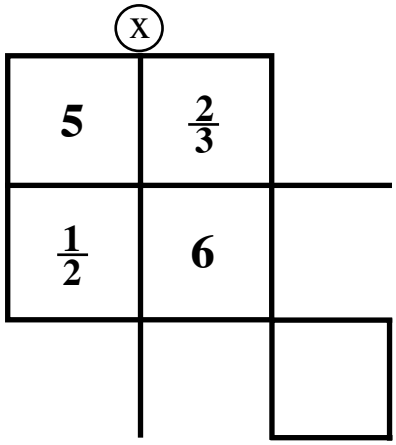
2.



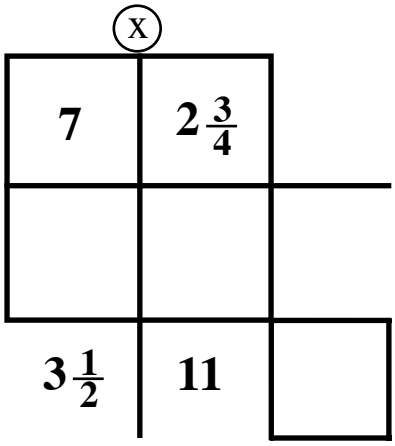
3.



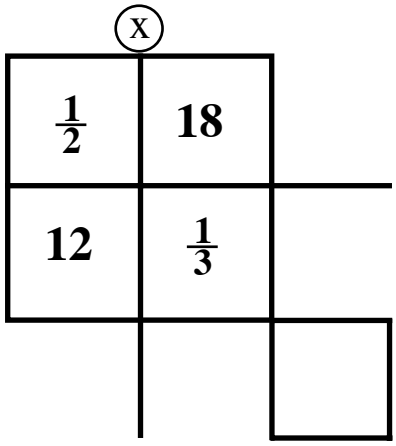
4.



5.



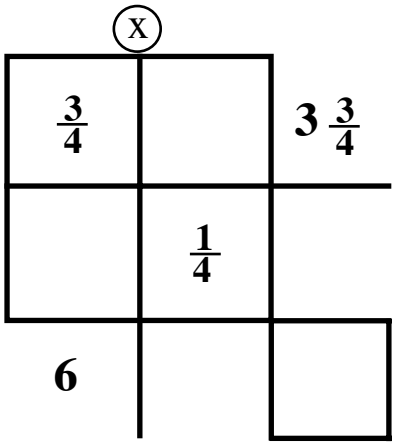
6.



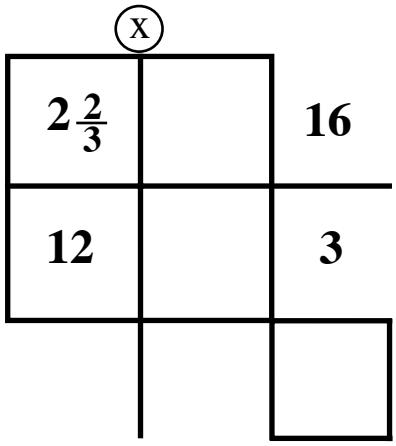
Copyright © 2002 Mathematics Learning

Fraction Two Ways # 6

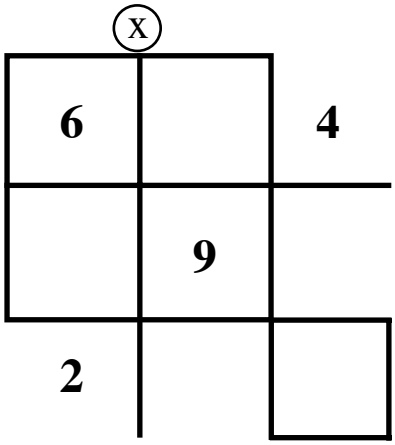
1.



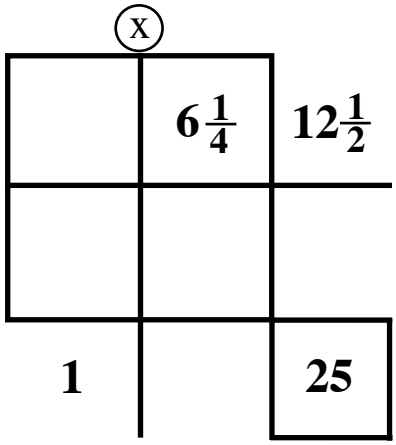
2.



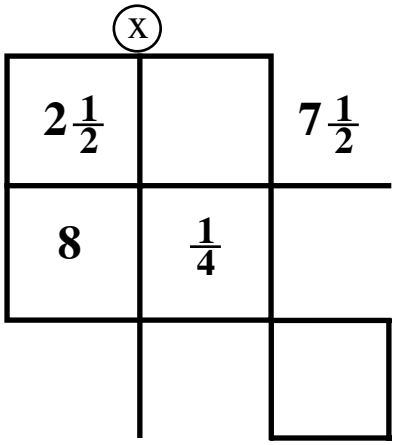
3.



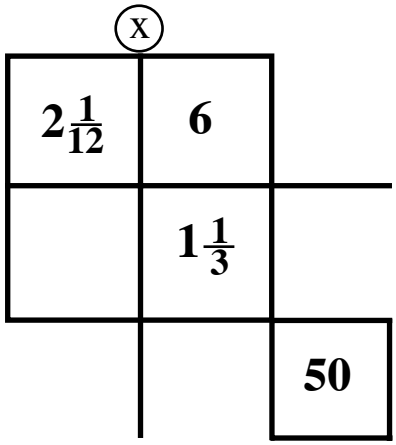
4.



5.



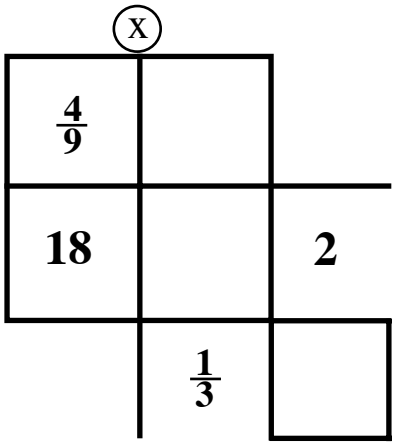
6.



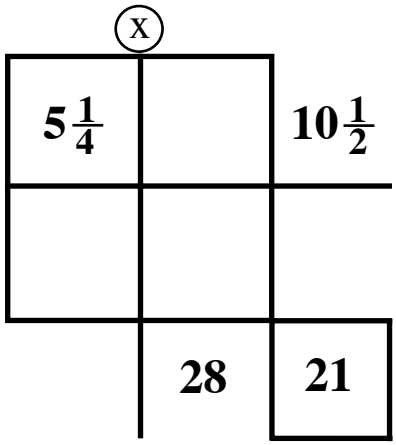
Copyright © 2002 Mathematics Learning

Fraction Two Ways # 7

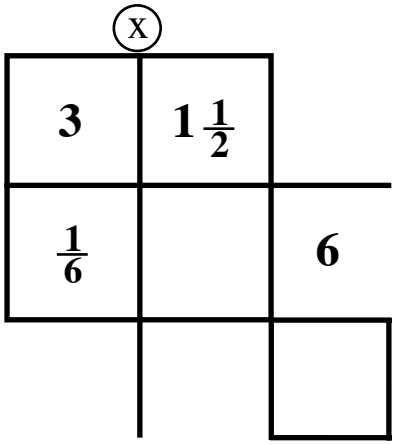
1.



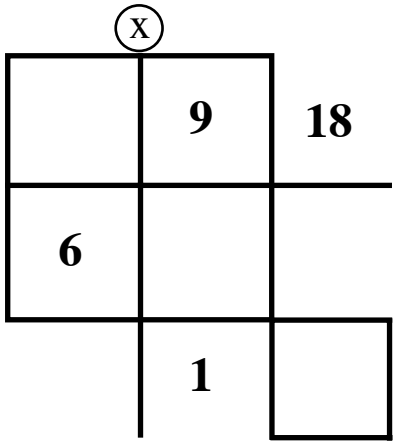
2.



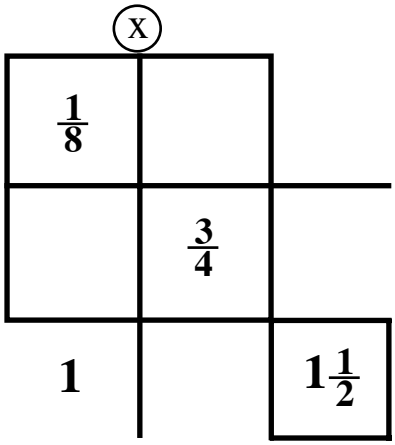
3.



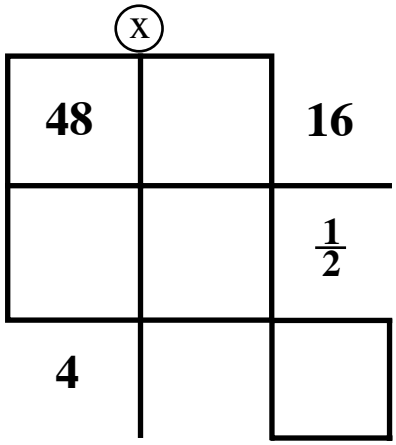
4.



5.



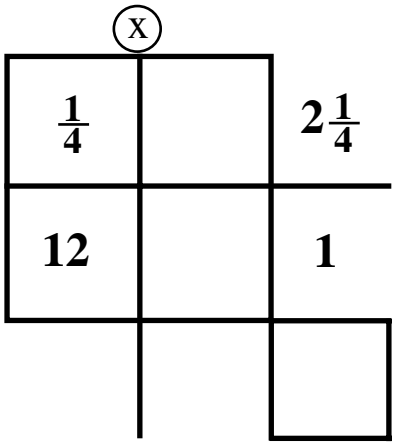
6.



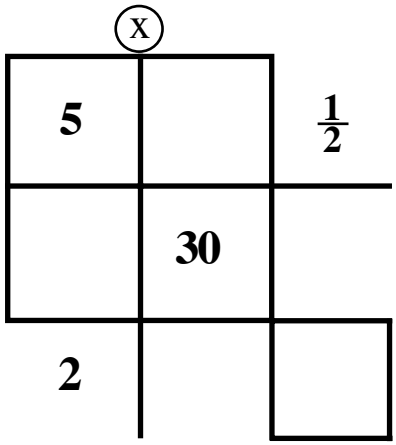
Copyright © 2002 Mathematics Learning

Fraction Two Ways # 8

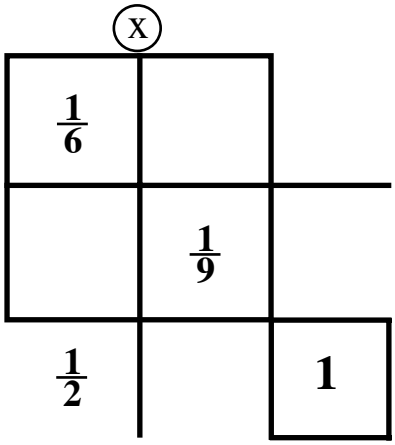
1.



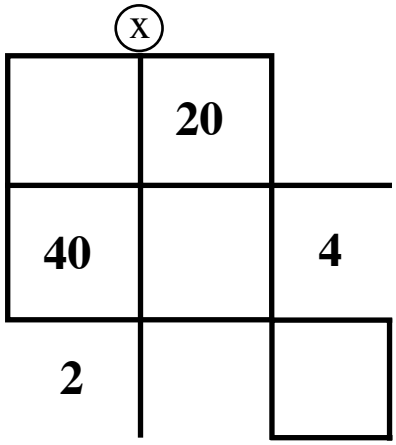
2.



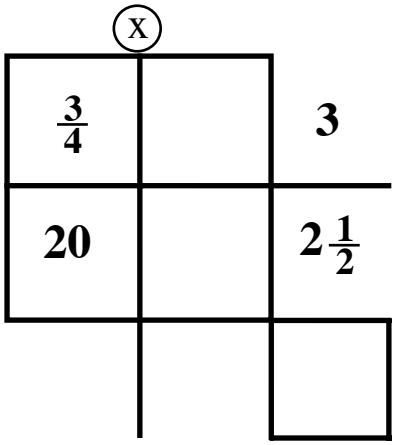
3.



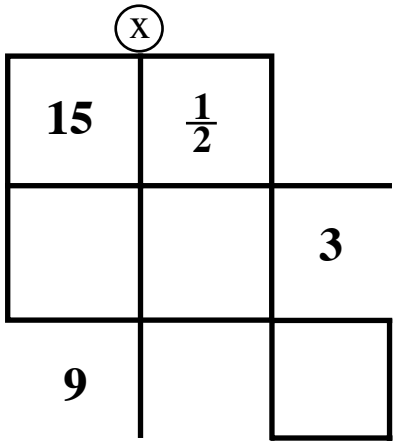
4.



5.



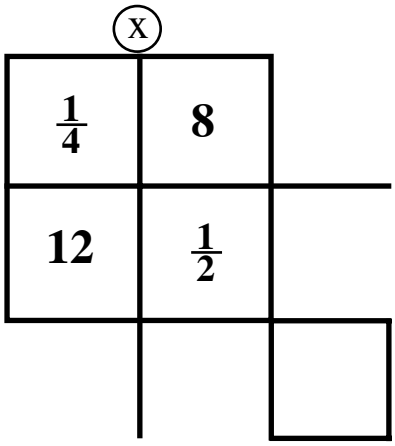
6.



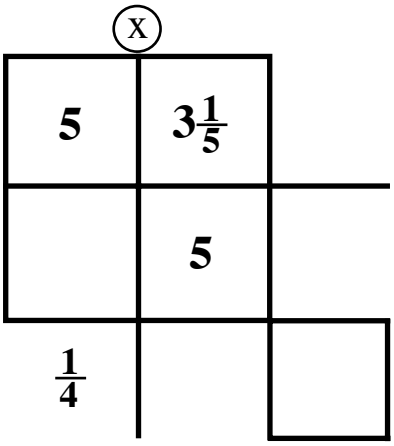
Copyright © 2002 Mathematics Learning

Fraction Two Ways # 9

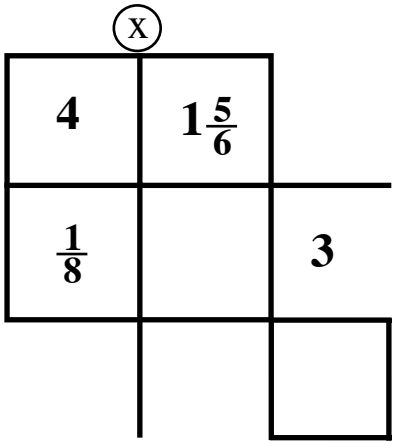
1.



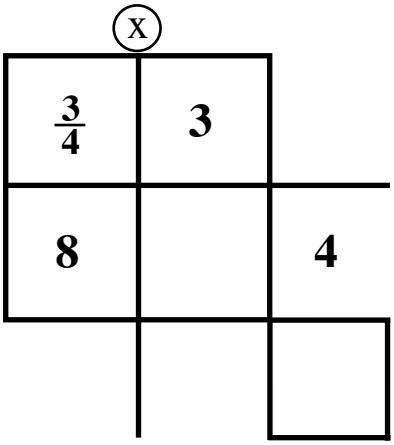
2.



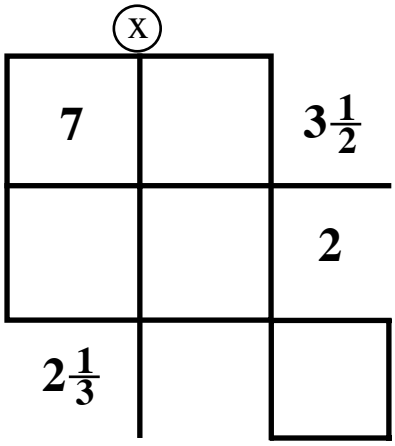
3.



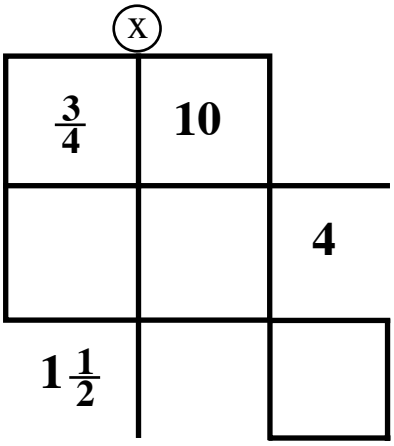
4.



5.



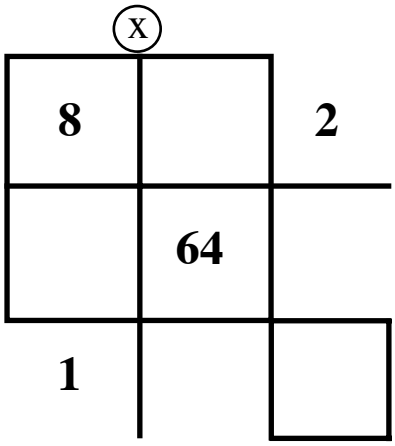
6.



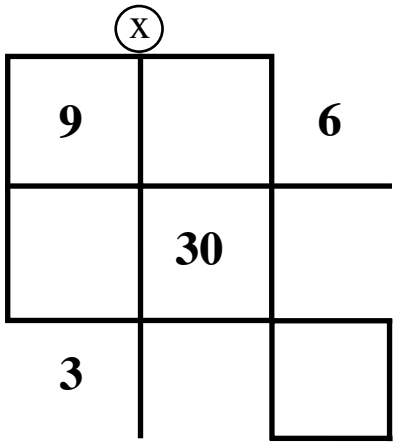
Copyright © 2002 Mathematics Learning

Fraction Two Ways # 10

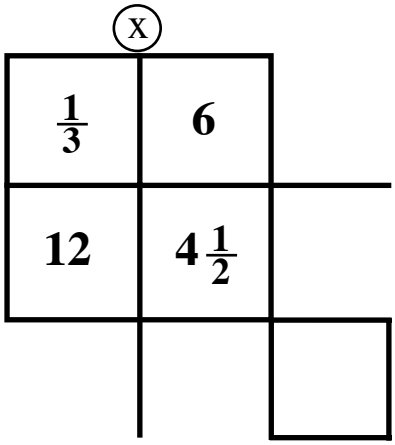
1.



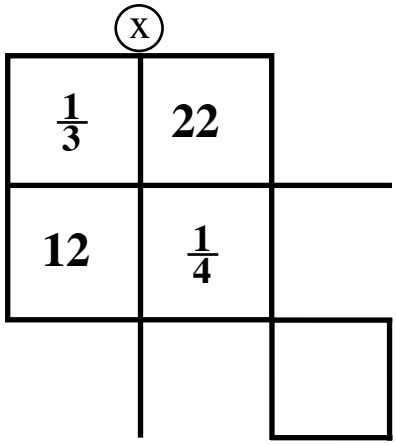
2.



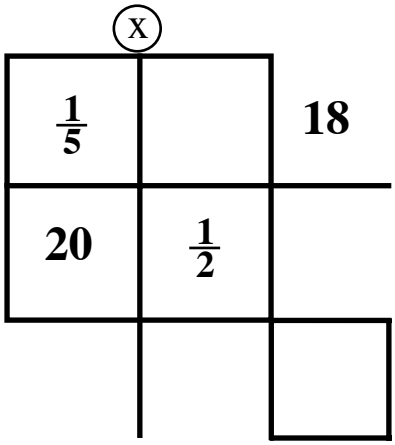
3.



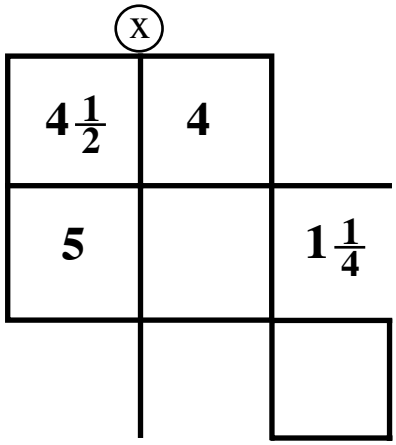
4.



5.

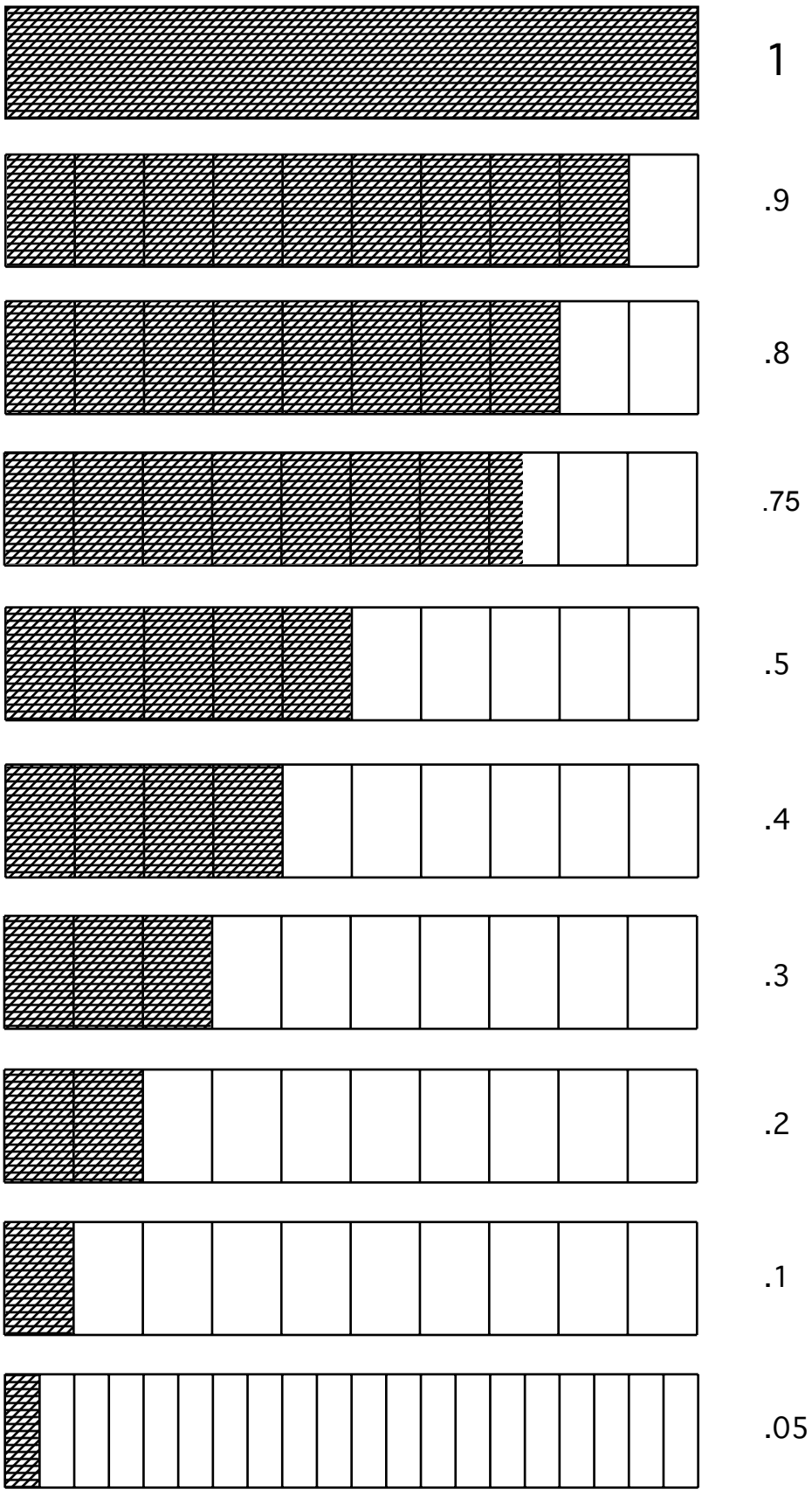


6.



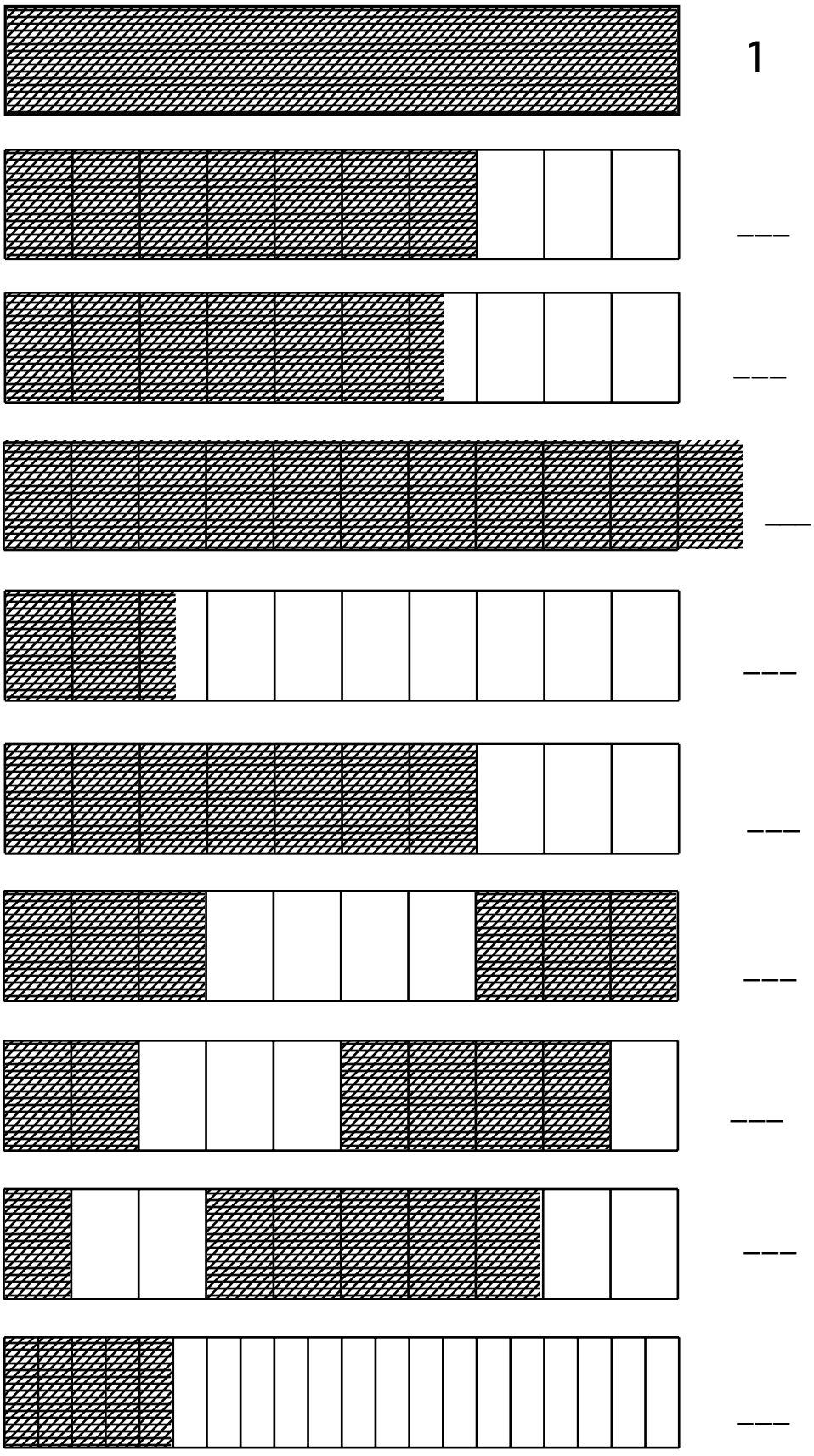
Copyright © 2002 Mathematics Learning

Decimal Bars



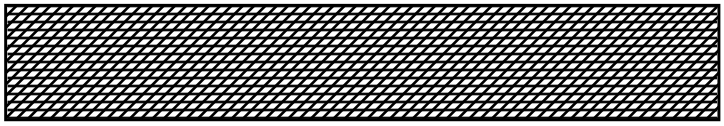
Copyright © 2002 Mathematics Learning

Decimal Bars

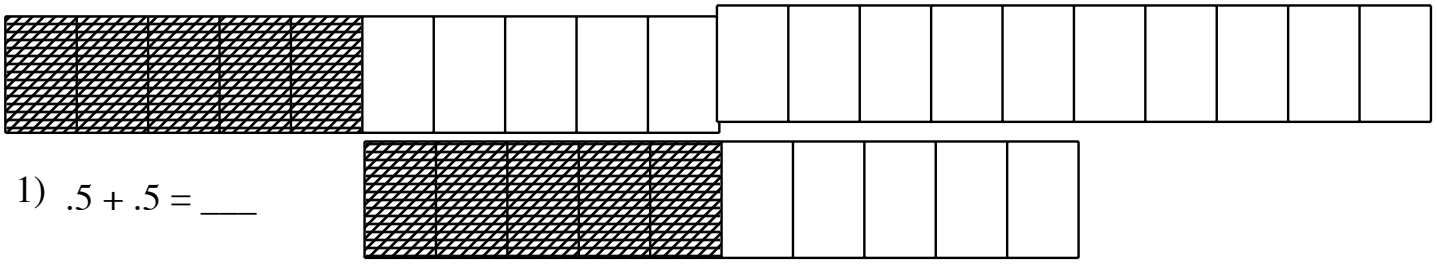


Copyright © 2002 Mathematics Learning

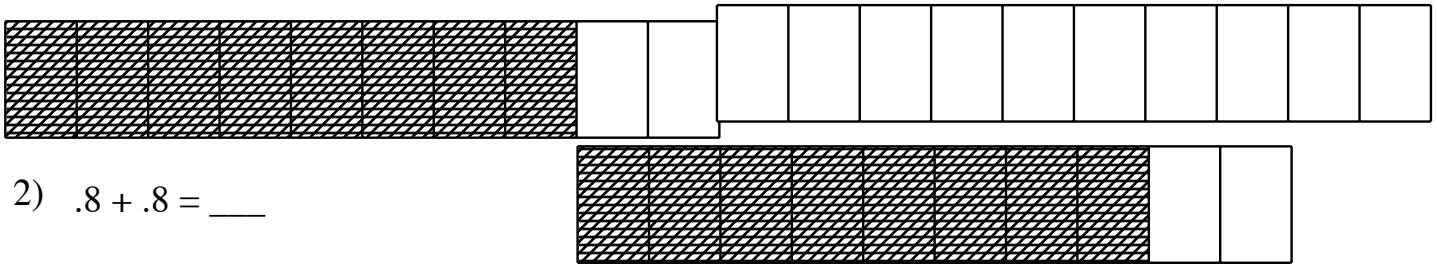
Decimal Bars



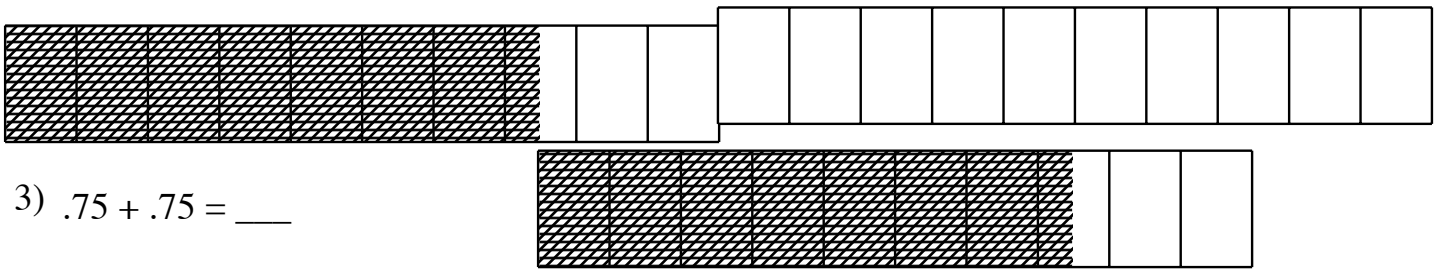
1



1) .5 + .5 = ___



2) .8 + .8 = ___



3) .75 + .75 = ___

4) .2 + .8 = ___

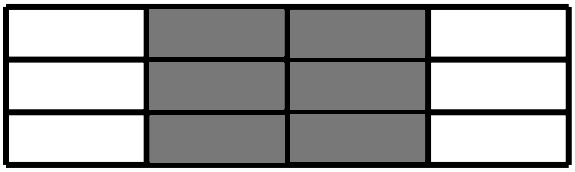
5) .7 + .8 = ___

6) .9 + .9 = ___

7) 1.2 + .9 = ___

Copyright © 2002 Mathematics Learning

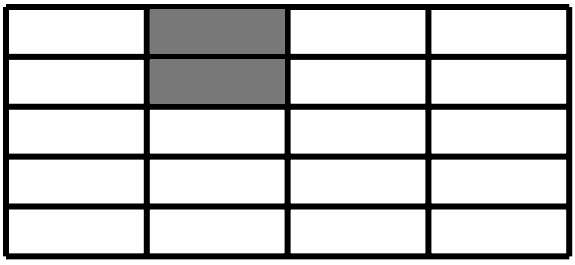
Decimals and Fractions # 1

1. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

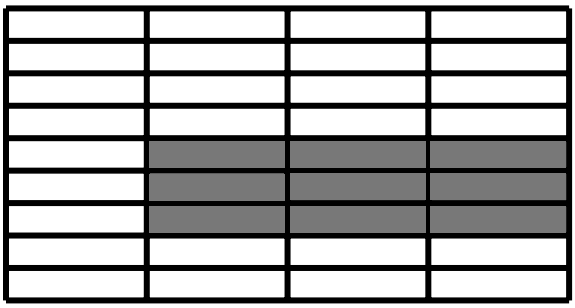
c. What decimal part of the rectangle is NOT shaded? _____

2. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

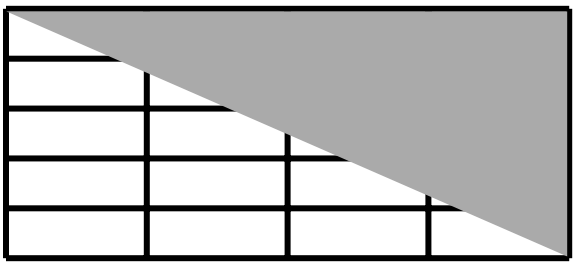
c. What decimal part of the rectangle is NOT shaded? _____

3. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

c. What decimal part of the rectangle is NOT shaded? _____

4. 

a. What fraction of the figure is shaded? _____

b. What decimal part of the figure is shaded? _____

c. What decimal part of the figure is NOT shaded? _____

Copyright © 2002 Mathematics Learning

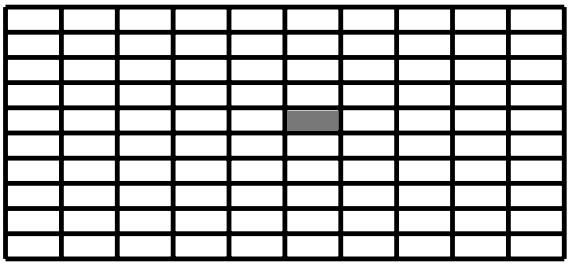
Decimals and Fractions # 2

1.

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

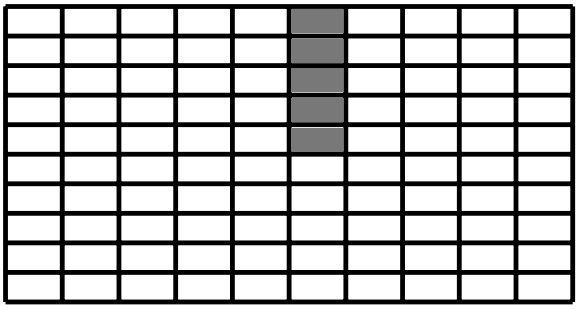
c. What decimal part of the rectangle is NOT shaded? _____

2. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

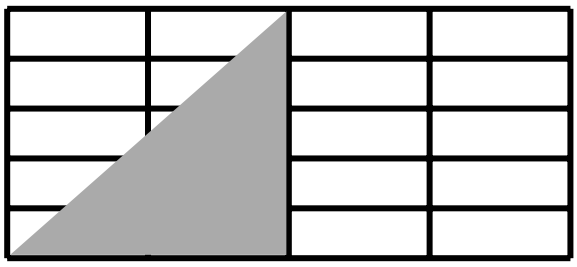
c. What decimal part of the rectangle is NOT shaded? _____

3. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

c. What decimal part of the rectangle is NOT shaded? _____

4. 

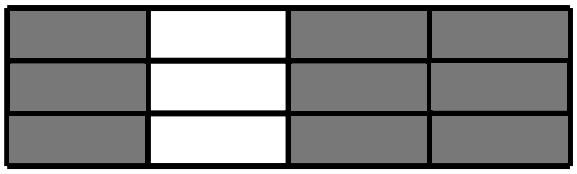
a. What fraction of the figure is shaded? _____

b. What decimal part of the figure is shaded? _____

c. What decimal part of the figure is NOT shaded? _____

Copyright © 2002 Mathematics Learning

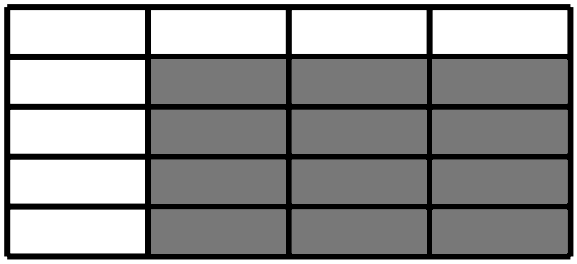
Decimals and Fractions # 3

1. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

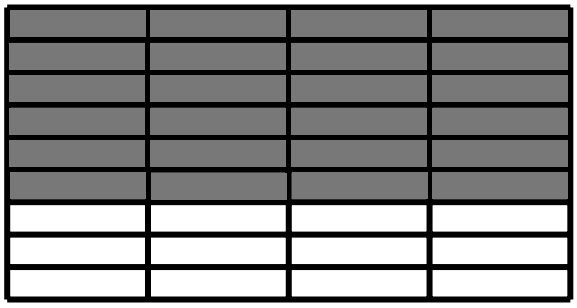
c. What decimal part of the rectangle is NOT shaded? _____

2. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

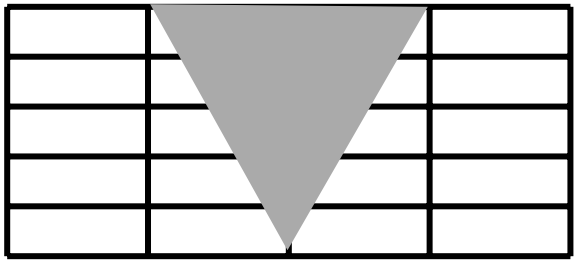
c. What decimal part of the rectangle is NOT shaded? _____

3. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

c. What decimal part of the rectangle is NOT shaded? _____

4. 

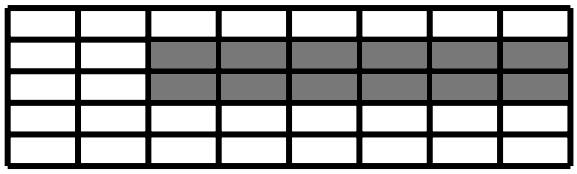
a. What fraction of the figure is shaded? _____

b. What decimal part of the figure is shaded? _____

c. What decimal part of the figure is NOT shaded? _____

Copyright © 2002 Mathematics Learning

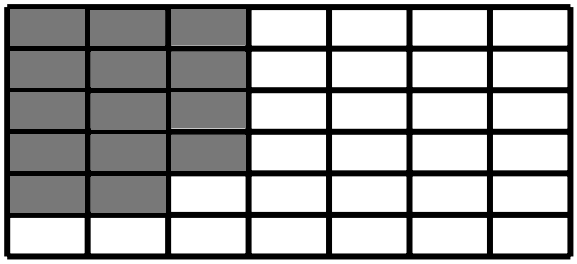
Decimals and Fractions # 4

1. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

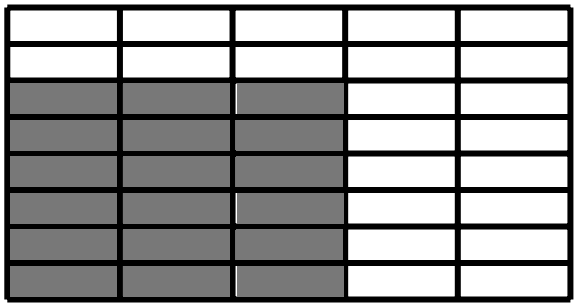
c. What decimal part of the rectangle is NOT shaded? _____

2. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

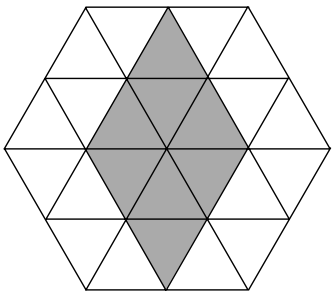
c. What decimal part of the rectangle is NOT shaded? _____

3. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

c. What decimal part of the rectangle is NOT shaded? _____

4. 

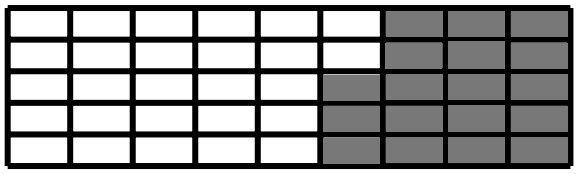
a. What fraction of the figure is shaded? _____

b. What decimal part of the figure is shaded? _____

c. What decimal part of the figure is NOT shaded? _____

Copyright © 2002 Mathematics Learning

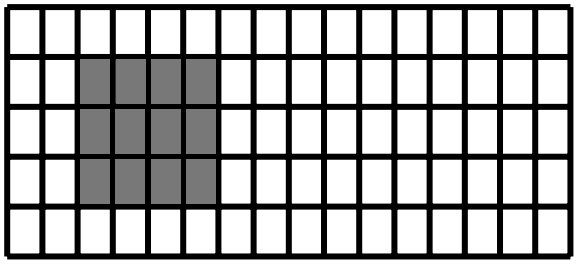
Decimals and Fractions # 5

1. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

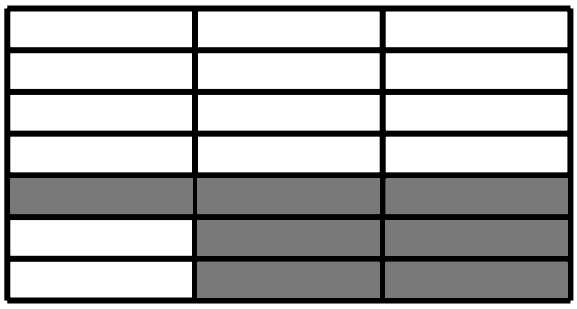
c. What decimal part of the rectangle is NOT shaded? _____

2. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

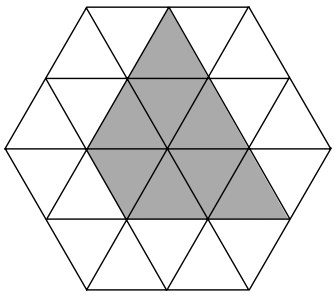
c. What decimal part of the rectangle is NOT shaded? _____

3. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

c. What decimal part of the rectangle is NOT shaded? _____

4. 

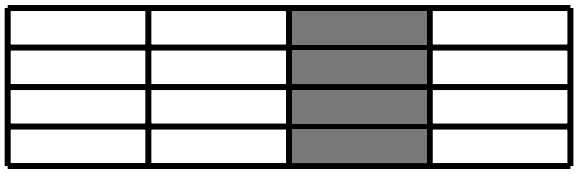
a. What fraction of the figure is shaded? _____

b. What decimal part of the figure is shaded? _____

c. What decimal part of the figure is NOT shaded? _____

Copyright © 2002 Mathematics Learning

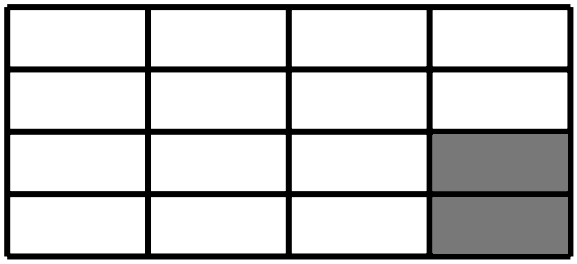
Decimals and Fractions # 6

1. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

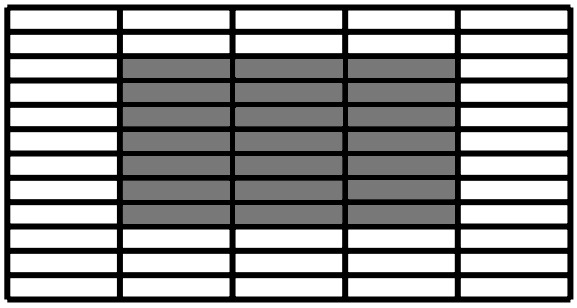
c. What decimal part of the rectangle is NOT shaded? _____

2. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

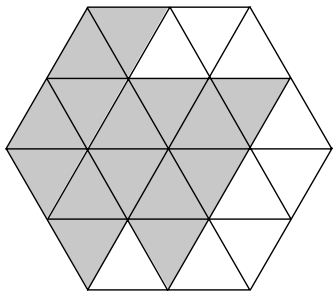
c. What decimal part of the rectangle is NOT shaded? _____

3. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

c. What decimal part of the rectangle is NOT shaded? _____

4. 

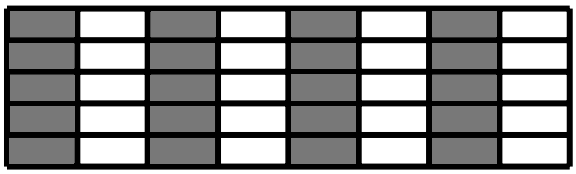
a. What fraction of the figure is shaded? _____

b. What decimal part of the figure is shaded? _____

c. What decimal part of the figure is NOT shaded? _____

Copyright © 2002 Mathematics Learning

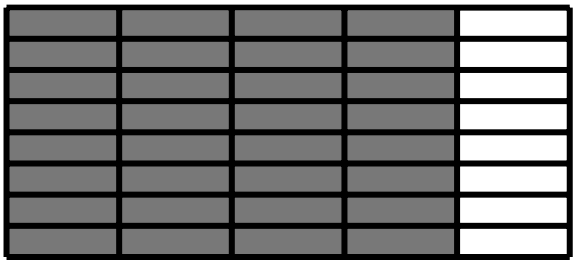
Decimals and Fractions # 7

1. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

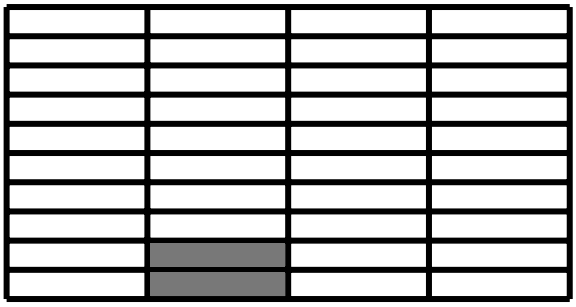
c. What decimal part of the rectangle is NOT shaded? _____

2. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

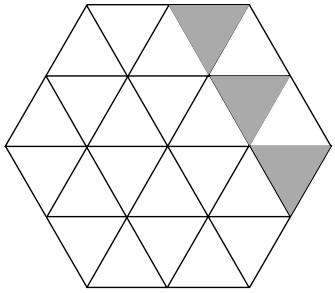
c. What decimal part of the rectangle is NOT shaded? _____

3. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

c. What decimal part of the rectangle is NOT shaded? _____

4. 

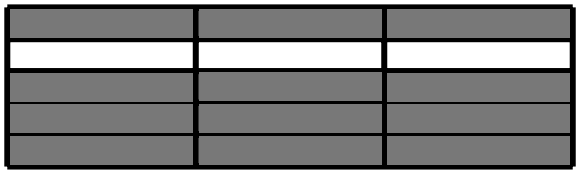
a. What fraction of the figure is shaded? _____

b. What decimal part of the figure is shaded? _____

c. What decimal part of the figure is NOT shaded? _____

Copyright © 2002 Mathematics Learning

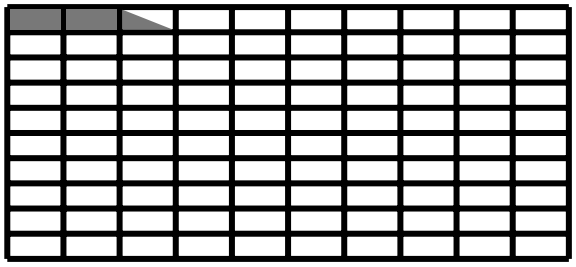
Decimals and Fractions # 8

1. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

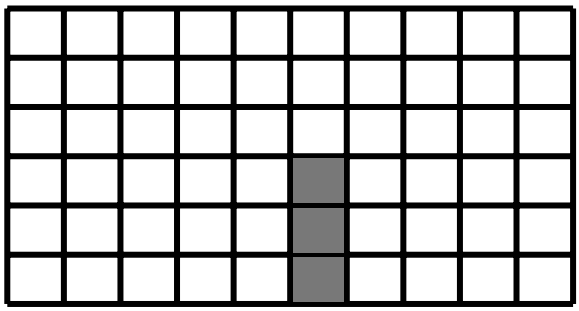
c. What decimal part of the rectangle is NOT shaded? _____

2. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

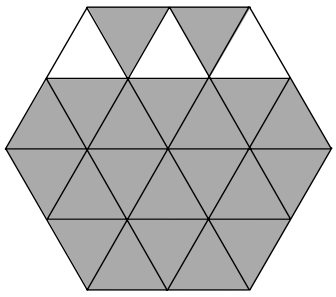
c. What decimal part of the rectangle is NOT shaded? _____

3. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

c. What decimal part of the rectangle is NOT shaded? _____

4. 

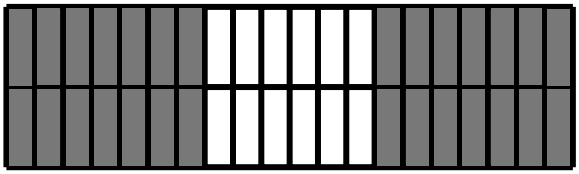
a. What fraction of the figure is shaded? _____

b. What decimal part of the figure is shaded? _____

c. What decimal part of the figure is NOT shaded? _____

Copyright © 2002 Mathematics Learning

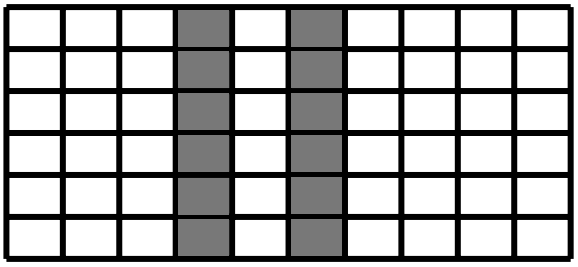
Decimals and Fractions # 9

1. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

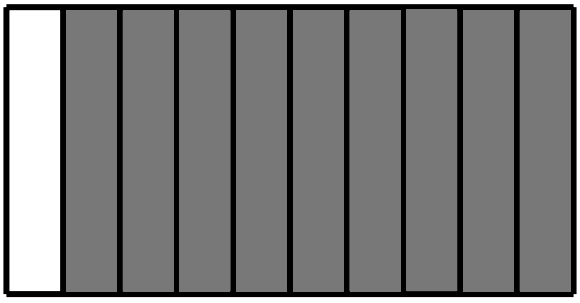
c. What decimal part of the rectangle is NOT shaded? _____

2. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

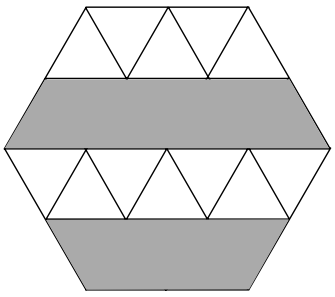
c. What decimal part of the rectangle is NOT shaded? _____

3. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

c. What decimal part of the rectangle is NOT shaded? _____

4. 

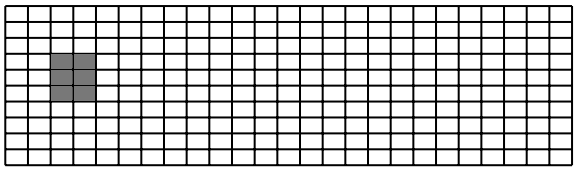
a. What fraction of the figure is shaded? _____

b. What decimal part of the figure is shaded? _____

c. What decimal part of the figure is NOT shaded? _____

Copyright © 2002 Mathematics Learning

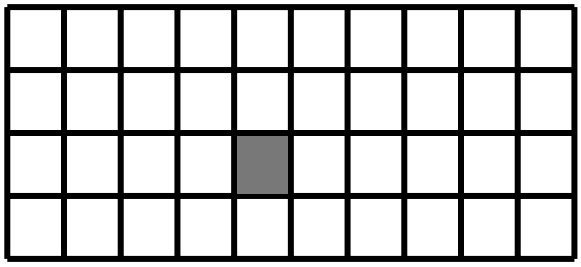
Decimals and Fractions # 10

1. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

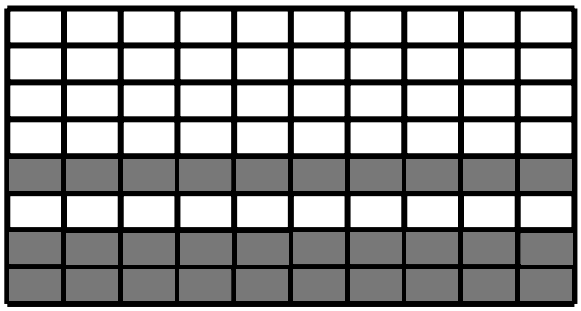
c. What decimal part of the rectangle is NOT shaded? _____

2. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

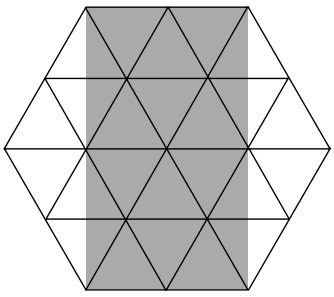
c. What decimal part of the rectangle is NOT shaded? _____

3. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

c. What decimal part of the rectangle is NOT shaded? _____

4. 

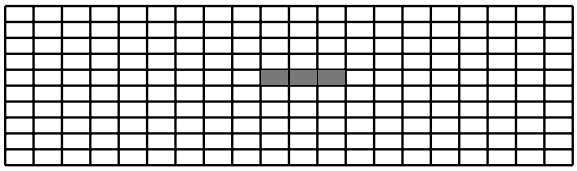
a. What fraction of the figure is shaded? _____

b. What decimal part of the figure is shaded? _____

c. What decimal part of the figure is NOT shaded? _____

Copyright © 2002 Mathematics Learning

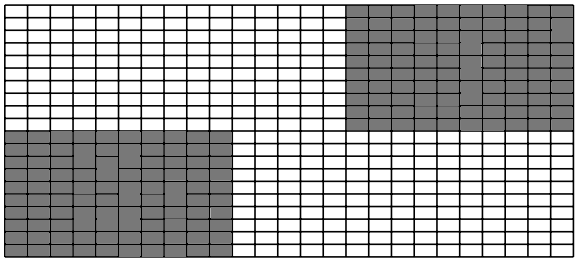
Decimals and Fractions # 11

1. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

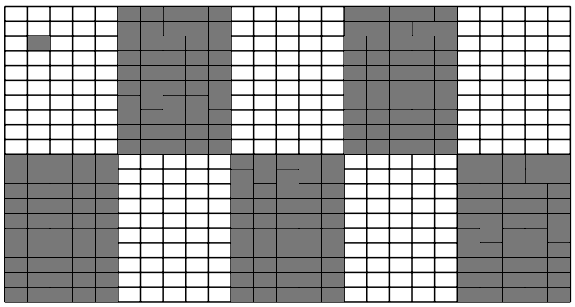
c. What decimal part of the rectangle is NOT shaded? _____

2. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

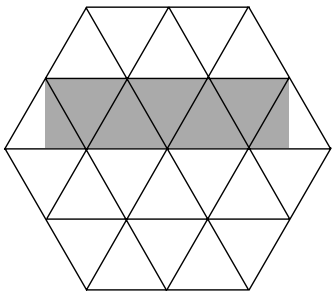
c. What decimal part of the rectangle is NOT shaded? _____

3. 

a. What fraction of the rectangle is shaded? _____

b. What decimal part of the rectangle is shaded? _____

c. What decimal part of the rectangle is NOT shaded? _____

4. 

a. What fraction of the figure is shaded? _____

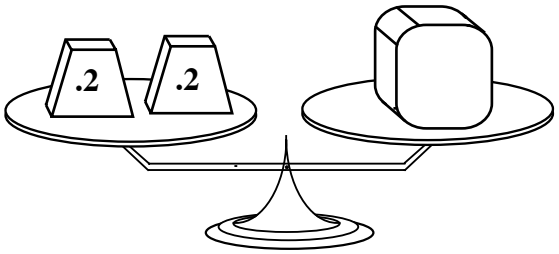
b. What decimal part of the figure is shaded? _____

c. What decimal part of the figure is NOT shaded? _____

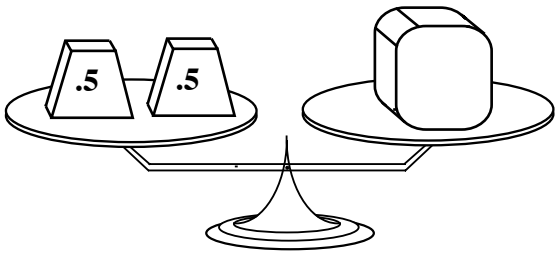
Copyright © 2002 Mathematics Learning

Decimal Balances #1

1.

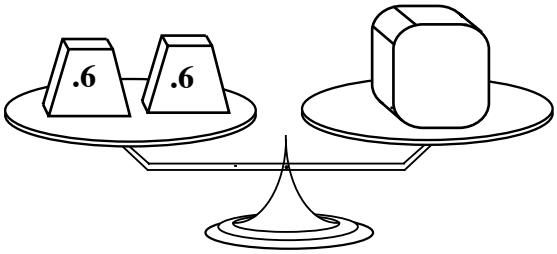


2.

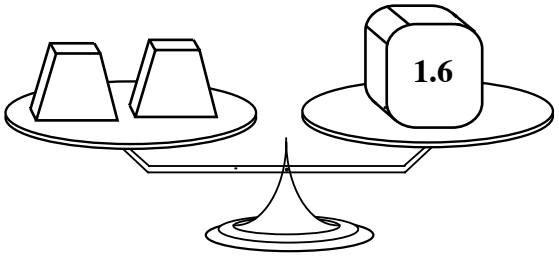


Boxes that are the same size and shape must have the same number in them.

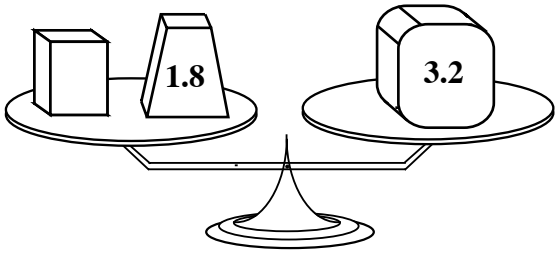
3.



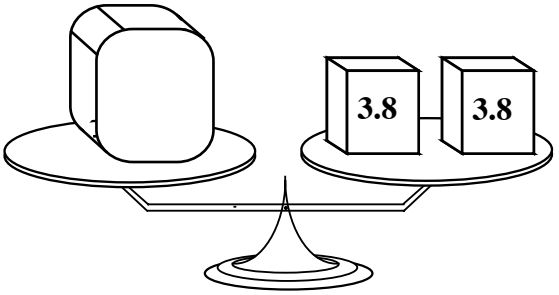
4.



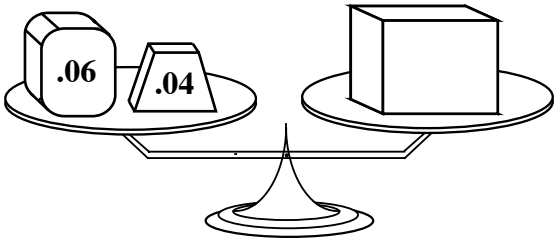
5.



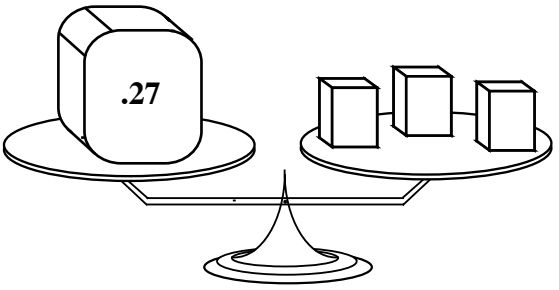
6.



7.



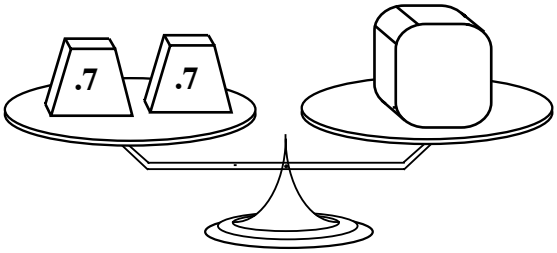
8.



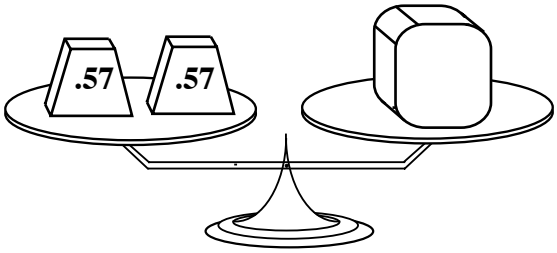
Copyright © 2002 Mathematics Learning

Decimal Balances #2

1.

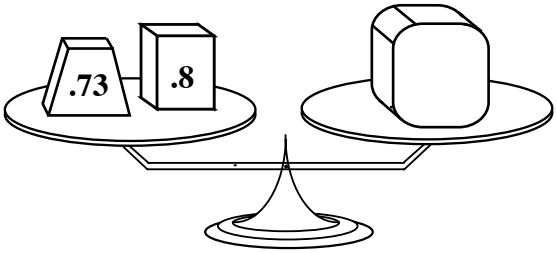


2.

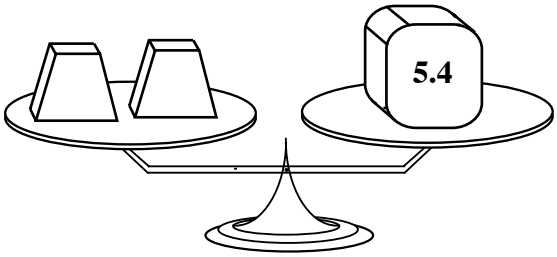


Boxes that are the same size and shape
must have the same number in them.

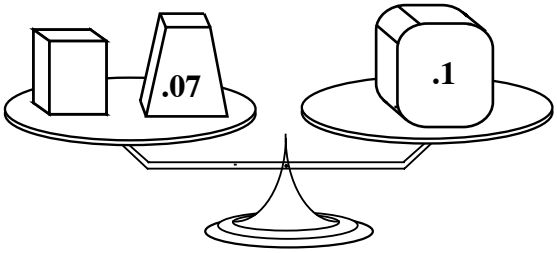
3.



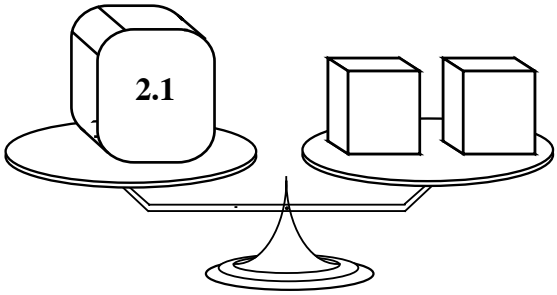
4.



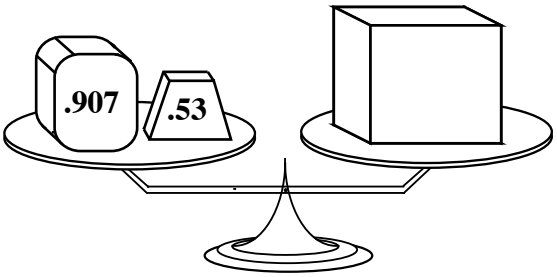
5.



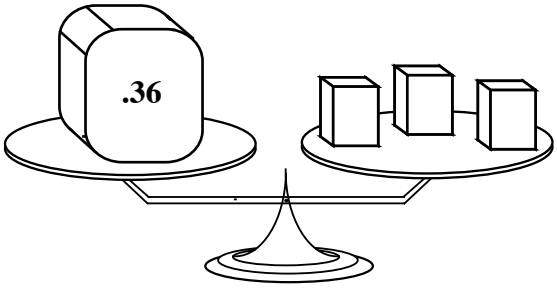
6.



7.



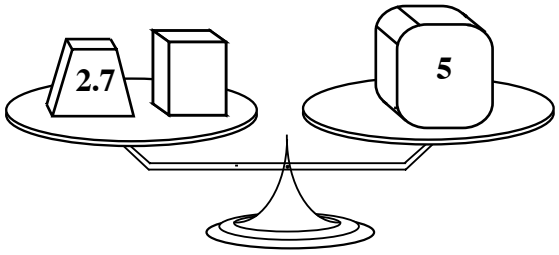
8.



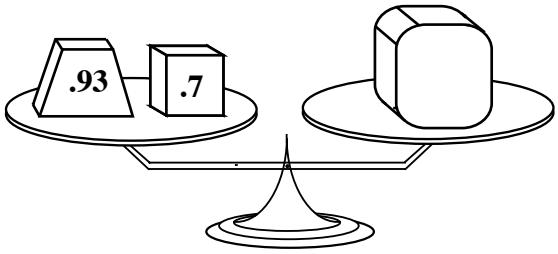
Copyright © 2002 Mathematics Learning

Decimal Balances #3

1.

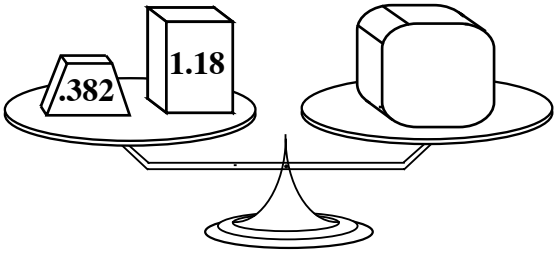


2.

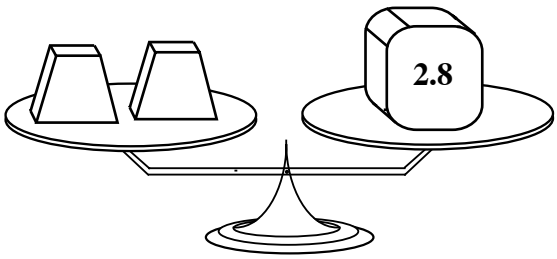


Boxes that are the same size and shape must have the same number in them.

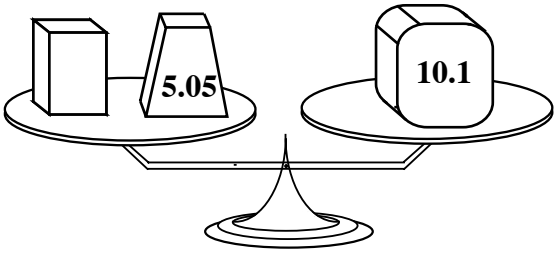
3.



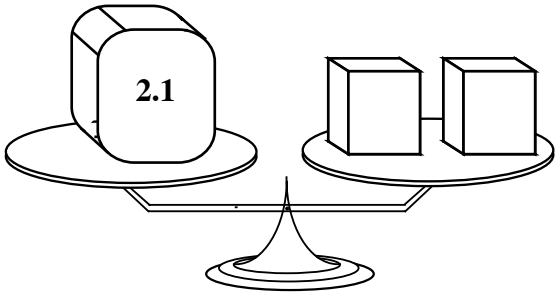
4.



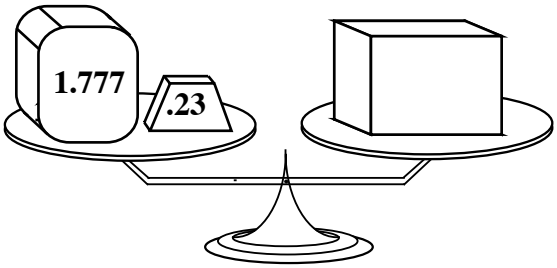
5.



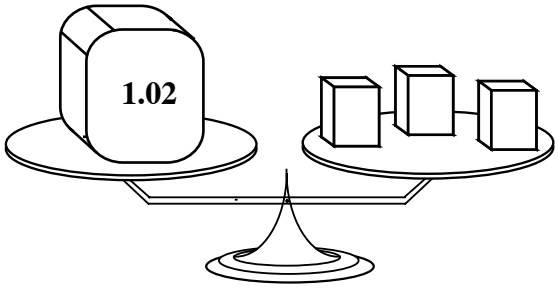
6.



7.



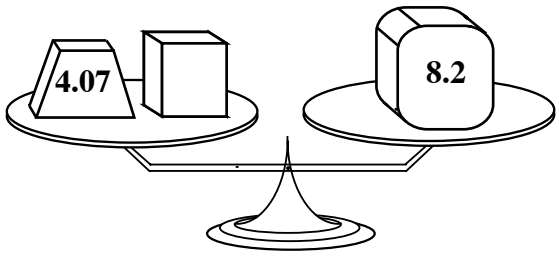
8.



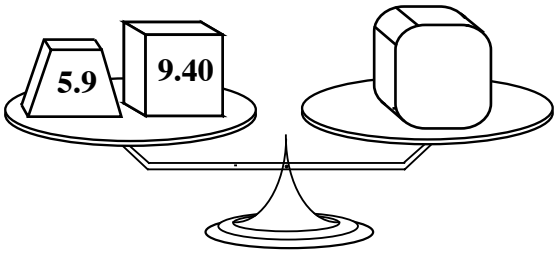
Copyright © 2002 Mathematics Learning

Decimal Balances #4

1.

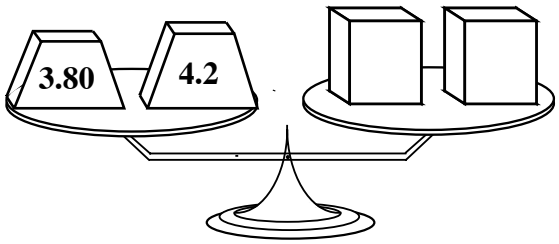


2.

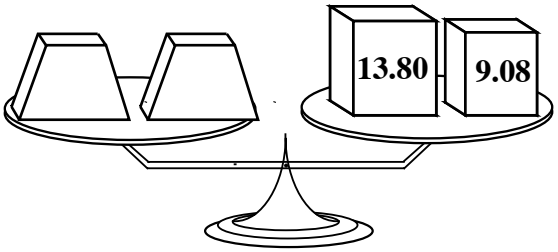


Boxes that are the same size and shape must have the same number in them.

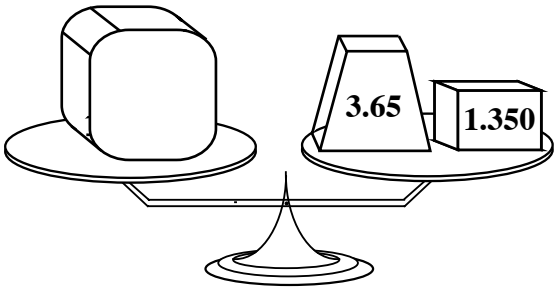
3.



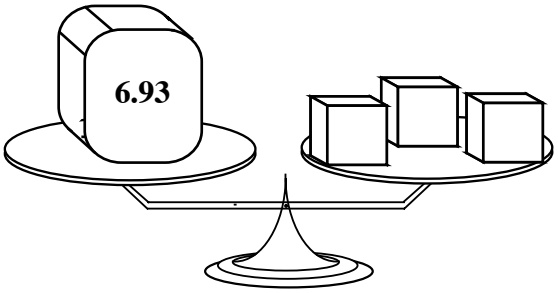
4.



5.



6.



7. Pedro and Zita had just enough money to buy two movie tickets. Pedro had $4.72 and Zita had $6.18. How much did one ticket cost?

8. 7.49 + 2.6 =

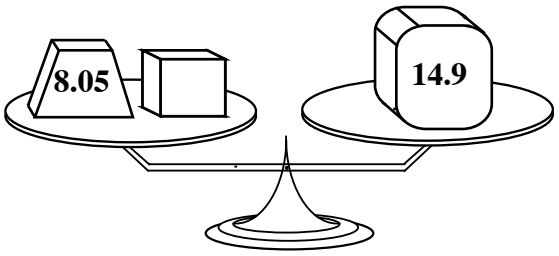
9. 20 - 15.020 =

Copyright © 2002 Mathematics Learning

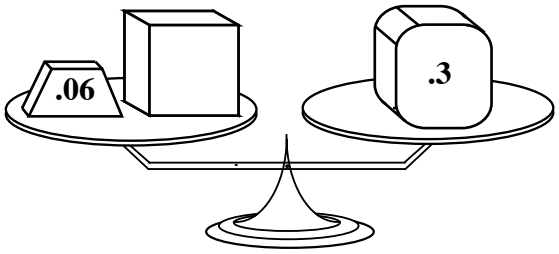
Decimal Balances #5

#1

1.

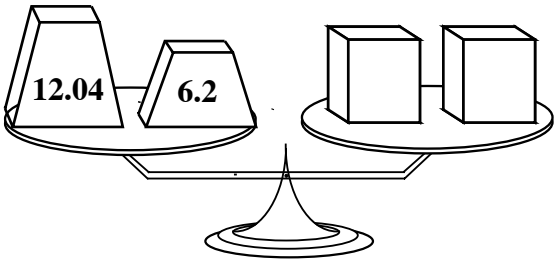


2.

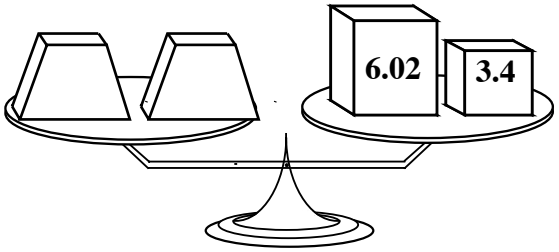


Boxes that are the same size and shape must have the same number in them.

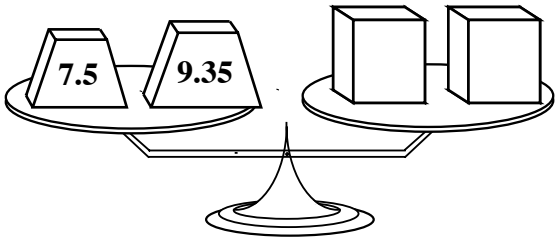
3.



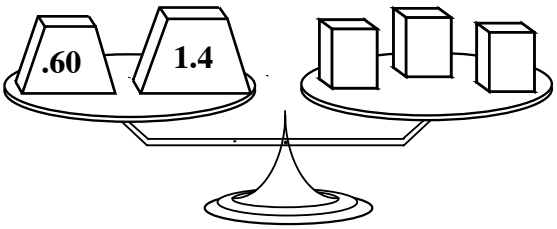
4.



5.



6.



7. The heights of three girls are: Tanya 1.73 meters, Linda 1.57 meters, and Catalina 1.5 meters. What is the average height of the girls?

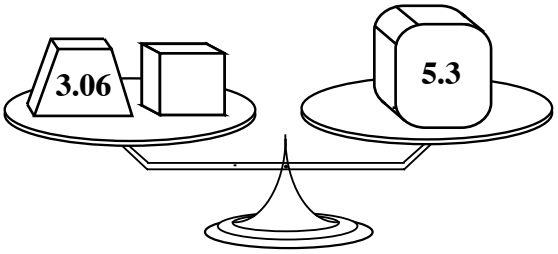
8. 6.105 + .9 =

9. 17 - 8.07 =

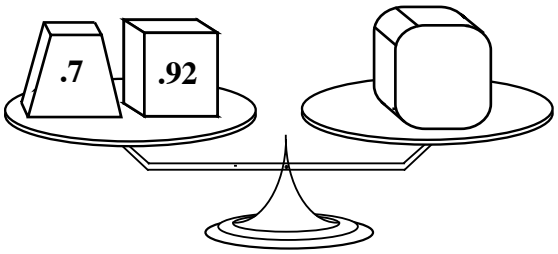
Copyright © 2002 Mathematics Learning

Decimal Balances #6

1.

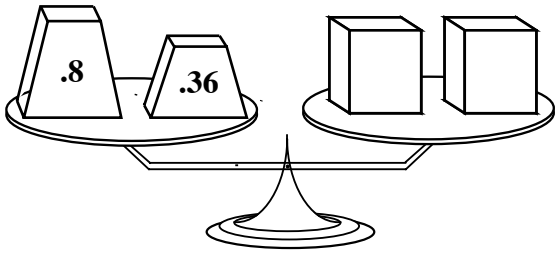


2.

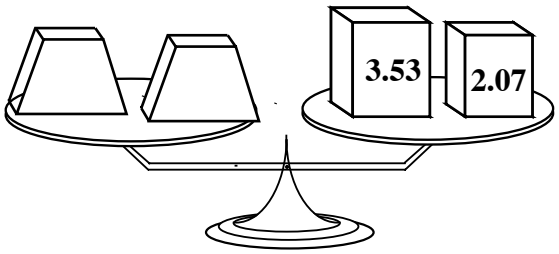


Boxes that are the same size and shape must have the same number in them.

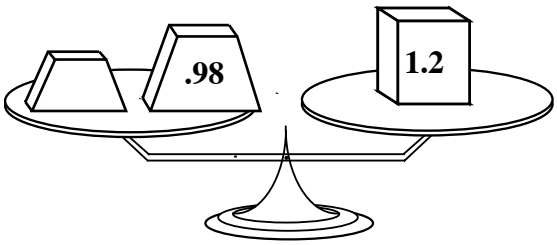
3.



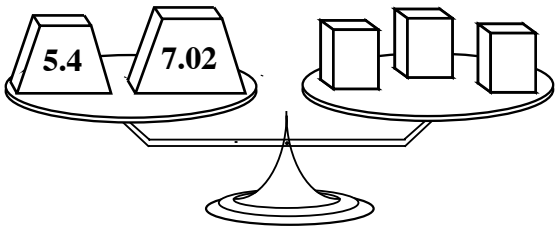
4.



5.



6.



7. Pat had $5.60, Sal had $3.92, and Wan had $4.08. They had just enough money to buy two pizzas. How much did one pizza cost?

8. .206 + .84 =

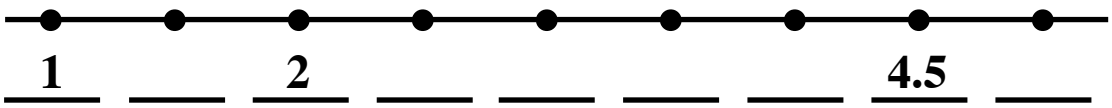
9. 12.01 - 4.5

Copyright © 2002 Mathematics Learning

Decimal Sequence # 1

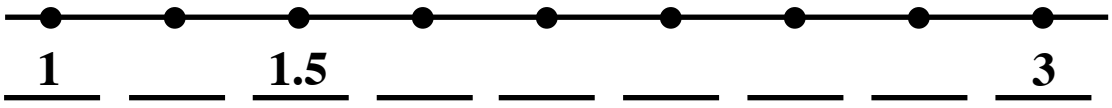
Name each point on the line with a decimal.

1)



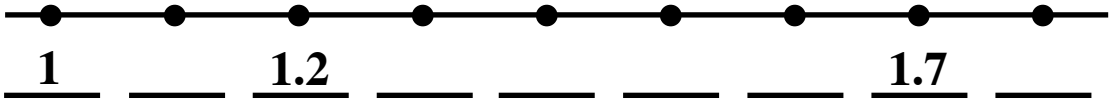
Δ = _____ **Decimal word name =** _____

2)



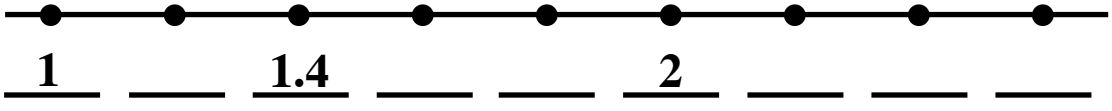
Δ = _____ **Decimal word name =** _____

3)



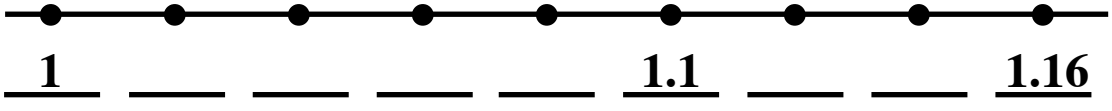
Δ = _____ **Decimal word name =** _____

4)



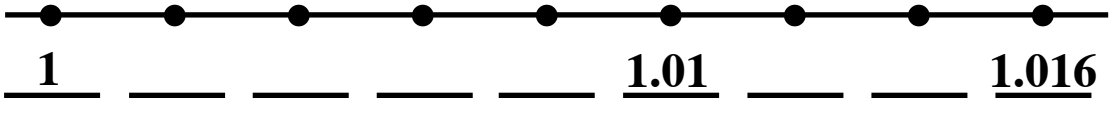
Δ = _____ **Decimal word name =** _____

5)



Δ = _____ **Decimal word name =** _____

6)



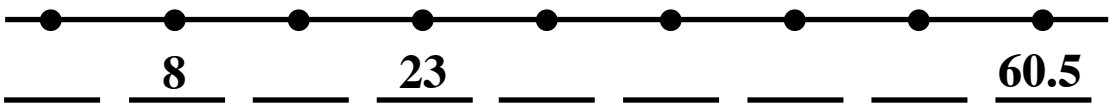
Δ = _____ **Decimal word name =** _____

Copyright © 2002 Mathematics Learning

Decimal Sequence # 2

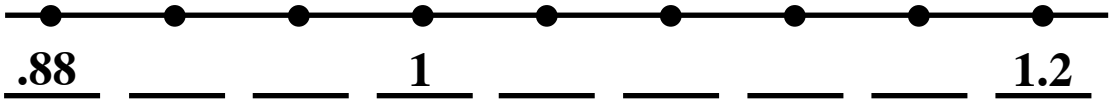
Name each point on the line with a decimal.

1)



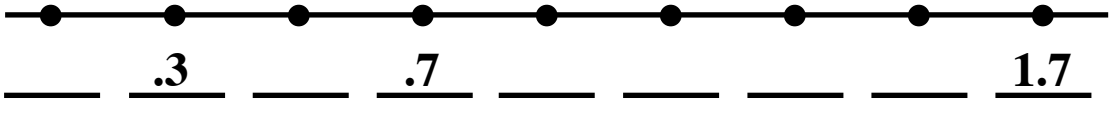
Δ = _____ **Decimal word name =** _____

2)



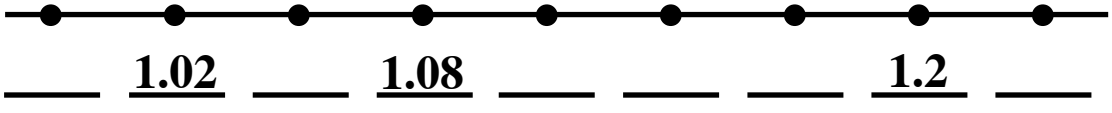
Δ = _____ **Decimal word name =** _____

3)



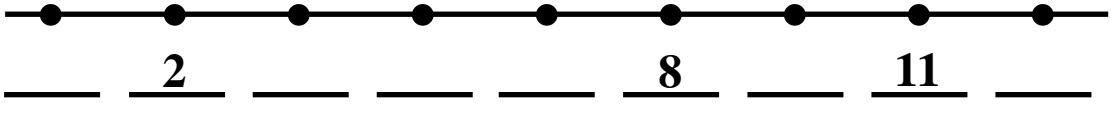
Δ = _____ **Decimal word name =** _____

4)



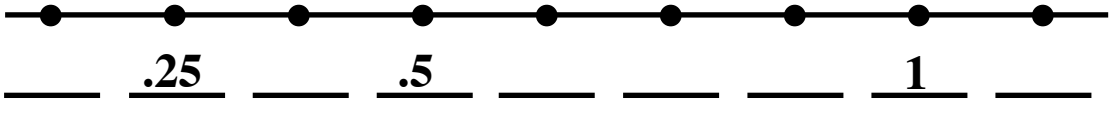
Δ = _____ **Decimal word name =** _____

5)



Δ = _____ **Decimal word name =** _____

6)

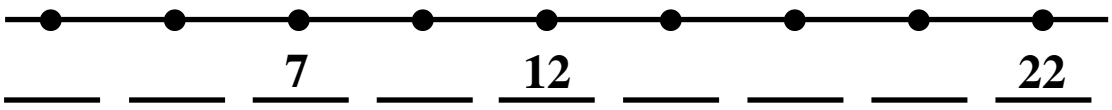


Δ = _____ **Decimal word name =** _____

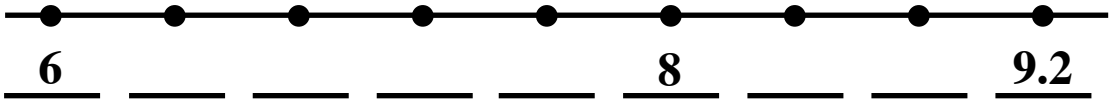
Copyright © 2002 Mathematics Learning

Decimal Sequence # 3

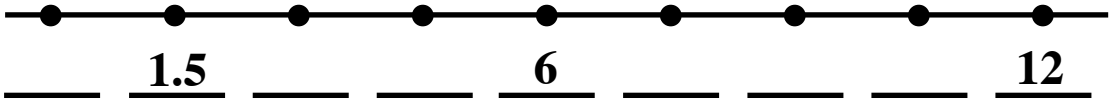
Name each point on the line with a decimal.

1) 

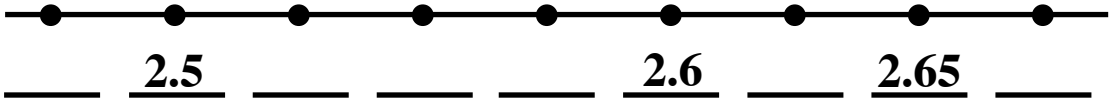
Δ = _____ **Decimal word name =** _____

2) 

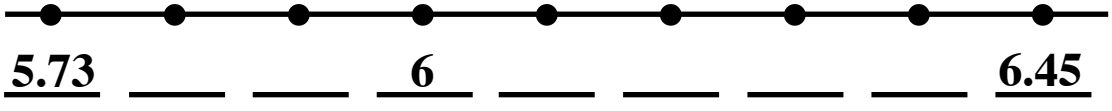
Δ = _____ **Decimal word name =** _____

3) 

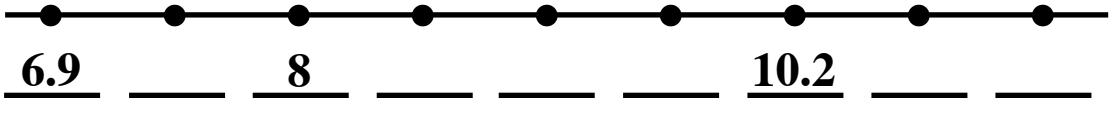
Δ = _____ **Decimal word name =** _____

4) 

Δ = _____ **Decimal word name =** _____

5) 

Δ = _____ **Decimal word name =** _____

6) 

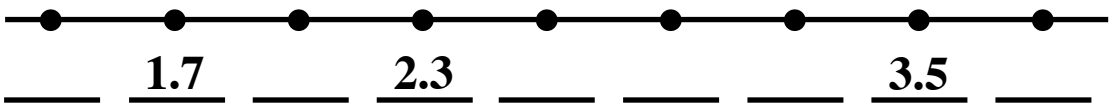
Δ = _____ **Decimal word name =** _____

Copyright © 2002 Mathematics Learning

Decimal Sequence # 4

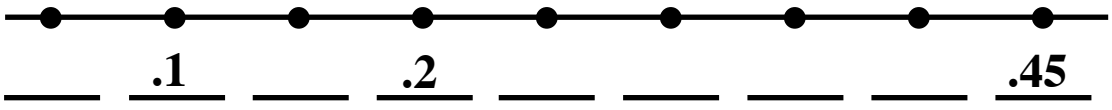
Name each point on the line with a decimal.

1)



Δ = _____ **Decimal word name =** _____

2)

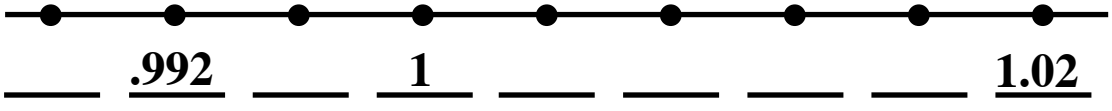


Δ = _____ **Decimal word name =** _____

3)

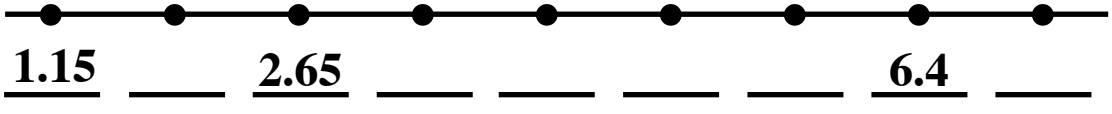
Δ = _____ **Decimal word name =** _____

4)



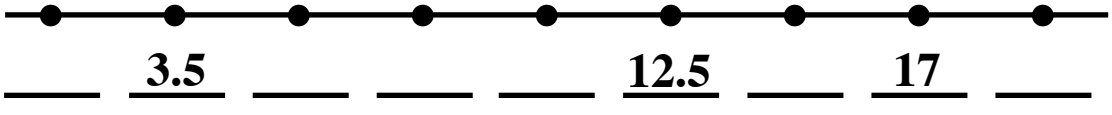
Δ = _____ **Decimal word name =** _____

5)



Δ = _____ **Decimal word name =** _____

6)



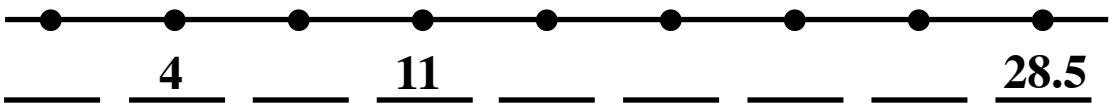
Δ = _____ **Decimal word name =** _____

Copyright © 2002 Mathematics Learning

Decimal Sequence # 5

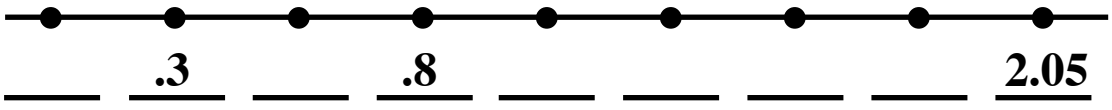
Name each point on the line with a decimal.

1)



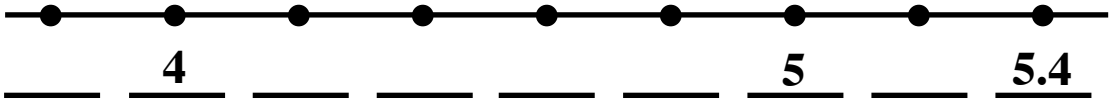
Δ = _____ **Decimal word name =** _____

2)



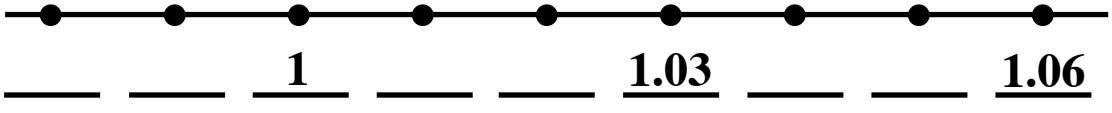
Δ = _____ **Decimal word name =** _____

3)



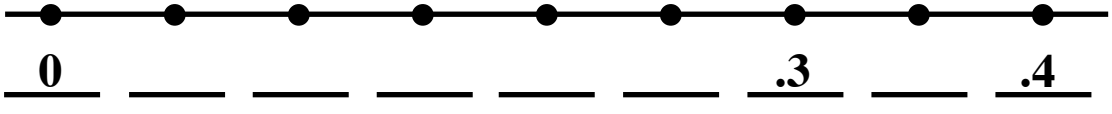
Δ = _____ **Decimal word name =** _____

4)



Δ = _____ **Decimal word name =** _____

5)



Δ = _____ **Decimal word name =** _____

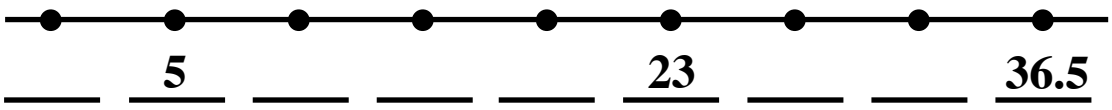
6)

Δ = _____ **Decimal word name =** _____

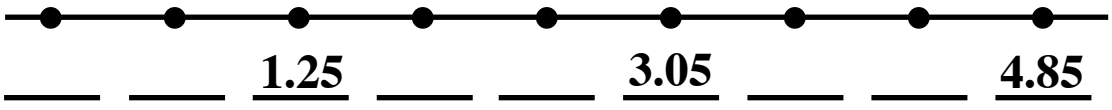
Copyright © 2002 Mathematics Learning

Decimal Sequence # 6

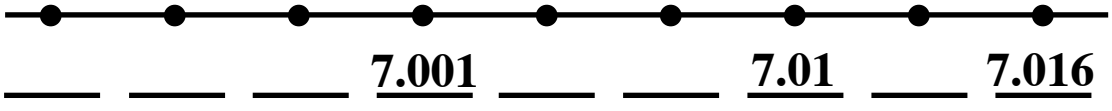
Name each point on the line with a decimal.

1) 

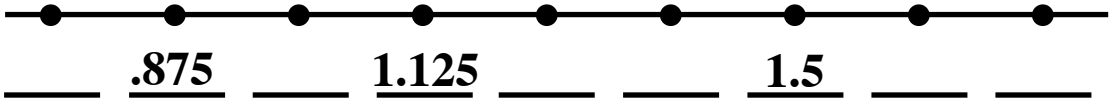
Δ = _____ **Decimal word name =** _____

2) 

Δ = _____ **Decimal word name =** _____

3) 

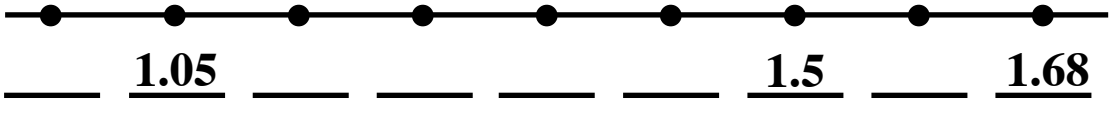
Δ = _____ **Decimal word name =** _____

4) 

Δ = _____ **Decimal word name =** _____

5)

Δ = _____ **Decimal word name =** _____

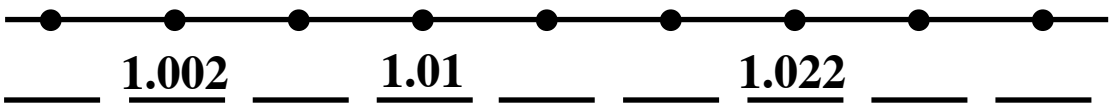
6) 

Δ = _____ **Decimal word name =** _____

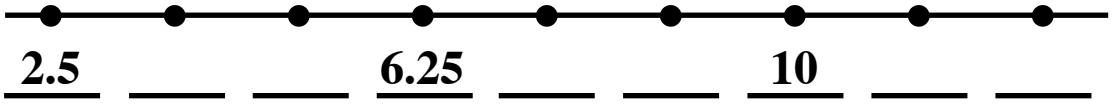
Copyright © 2002 Mathematics Learning

Decimal Sequence # 7

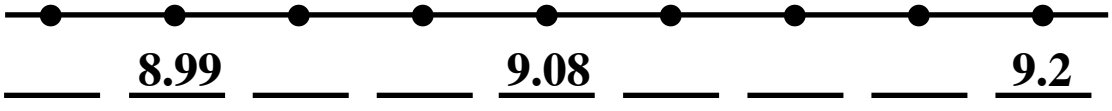
Name each point on the line with a decimal.

1) 

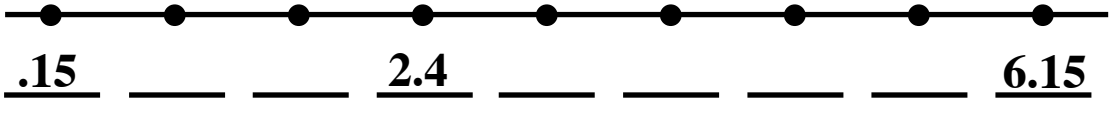
Δ = _____ **Decimal word name =** _____

2) 

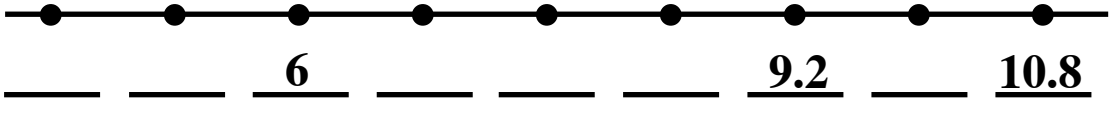
Δ = _____ **Decimal word name =** _____

3) 

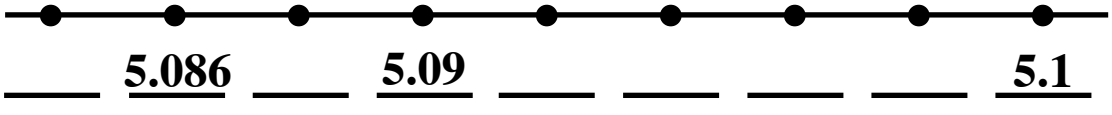
Δ = _____ **Decimal word name =** _____

4) 

Δ = _____ **Decimal word name =** _____

5) 

Δ = _____ **Decimal word name =** _____

6) 

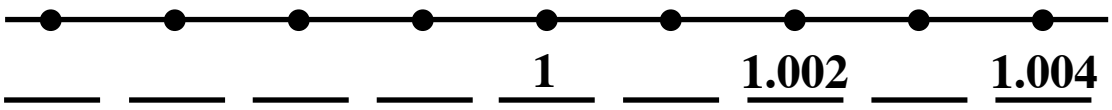
Δ = _____ **Decimal word name =** _____

Copyright © 2002 Mathematics Learning

Decimal Sequence # 8

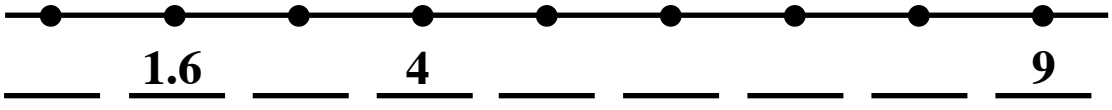
Name each point on the line with a decimal.

1)



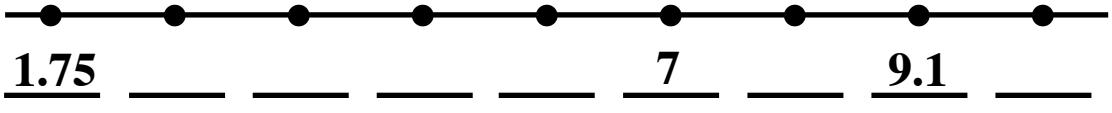
Δ = _____ **Decimal word name =** _____

2)



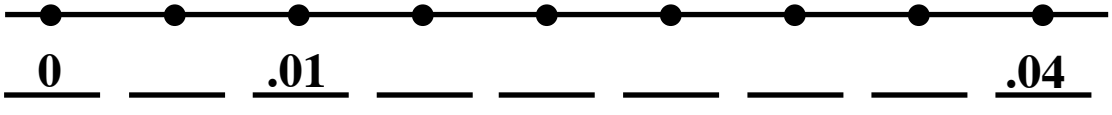
Δ = _____ **Decimal word name =** _____

3)



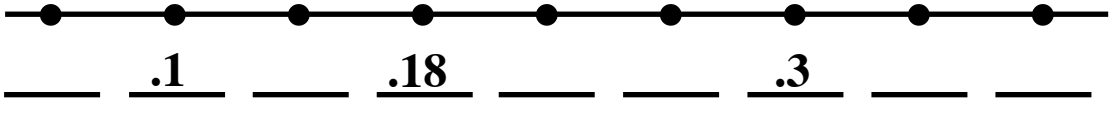
Δ = _____ **Decimal word name =** _____

4)



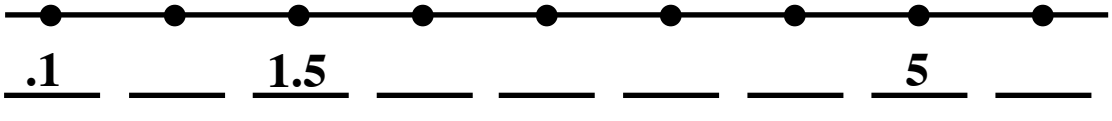
Δ = _____ **Decimal word name =** _____

5)



Δ = _____ **Decimal word name =** _____

6)



Δ = _____ **Decimal word name =** _____

Copyright © 2002 Mathematics Learning

Decimal Benchmark # 1

1.

1	.5	.25	.1	.05	.01	.001
1000						

a) .6 x 1000 = _____ b) .95 of 1000 is _____

c) .75 x 1000 = _____ d) .90 of 1000 is _____

e) .51 x 1000 = _____ f) .501 of 1000 is _____

g) .99 x 1000 = _____ h) .999 of 1000 is _____

i) 1.25 x 1000 = _____ j) 3.67 of 1000 is _____

Make up two of your own.

k) _____ x 1000 = _____ l) _____ of 1000 is _____

2.

1	.5	.25	.125	.1	.05	.01
80						

a) .09 of 80 = _____ b) .90 x 80 is _____

c) .60 of 80 = _____ d) .06 x 80 is _____

e) .625 of 80 = _____ f) .375 x 80 is _____

g) 1.25 of 80 = _____ h) .15 x 80 is _____

i) .24 of 80 = _____ j) 10.6 x 80 is _____

Make up two of your own.

k) _____ of 80 = _____ l) _____ x 80 is _____

Copyright © 2002 Mathematics Learning

Decimal Benchmark # 2

1.

1	.5	.25	.1	.05	.01	.001
500						

a) .3 x 500 = _____ b) .03 of 500 is _____

c) .35 x 500 = _____ d) .15 of 500 is _____

e) .75 x 500 = _____ f) .06 of 500 is _____

g) .9 x 500 = _____ h) .09 of 500 is _____

i) .009 x 500 = _____ j) 3.1 of 500 is _____

Make up two of your own.

k) _____ x 500 = _____ l) _____ of 500 is _____

2.

1	.5	.25	.125	.1	.05	.01
48						

a) .35 of 48 = _____ b) .15 x 48 is _____

c) .60 of 48 = _____ d) .95 x 48 is _____

e) .31 of 48 = _____ f) .9 x 48 is _____

g) .51 of 48 = _____ h) .375 x 48 is _____

i) .24 of 48 = _____ j) 2.50 x 48 is _____

Make up two of your own.

k) _____ of 48 = _____ l) _____ x 48 is _____

Copyright © 2002 Mathematics Learning

Decimal Benchmark # 3

1.

1	.5	.25	.1	.05	.01	.001
300						

a) .75 x 300 = _____ b) .35 of 300 is _____

c) .15 x 300 = _____ d) .6 of 300 is _____

e) .06 x 300 = _____ f) .55 of 300 is _____

g) .95 x 300 = _____ h) .4 of 300 is _____

i) .26 x 300 = _____ j) 2.1 of 300 is _____

Make up two of your own.

k) _____ x 300 = _____ l) _____ of 300 is _____

2.

1	.5	.25	.125	.1	.05	.01
40						

a) .75 of 40 = _____ b) .35 x 40 is _____

c) .15 of 40 = _____ d) .06 x 40 is _____

e) .375 of 40 = _____ f) .6 x 40 is _____

g) .9 of 40 = _____ h) 2.5 x 40 is _____

i) .49 of 40 = _____ j) 1.05 x 40 is _____

Make up two of your own.

k) _____ of 40 = _____ l) _____ x 40 is _____

Copyright © 2002 Mathematics Learning

Decimal Benchmark # 4

1.

1	.5	.25	.1	.05	.01	.001
30						

a) .3 x 30 = _____ b) .03 of 30 is _____

c) .35 x 30 = _____ d) .15 of 30 is _____

e) .75 x 30 = _____ f) .06 of 30 is _____

g) .9 x 30 = _____ h) .09 of 30 is _____

i) .009 x 30 = _____ j) 3.1 of 30 is _____

Make up two of your own.

k) _____ x 30 = _____ l) _____ of 30 is _____

2.

1	.5	.25	.125	.1	.05	.01
120						

a) .35 of 120 = _____ b) .15 x 120 is _____

c) .6 of 120 = _____ d) .06 x 120 is _____

e) .3 of 120 = _____ f) .9 x 120 is _____

g) .135 of 120 = _____ h) .09 x 120 is _____

i) .24 of 120 = _____ j) 1.75 x 120 is _____

Make up two of your own.

k) _____ of 120 = _____ l) _____ x 120 is _____

Copyright © 2002 Mathematics Learning

Decimal Benchmark # 5

1.

1	.5	.25	.1	.05	.01	.001
60						

a) .3 x 60 = _____ b) .06 of 60 is _____

c) .6 x 60 = _____ d) .15 of 60 is _____

e) .125 x 60 = _____ f) 1.25 of 60 is _____

g) .35 x 60 = _____ h) .09 of 60 is _____

i) .51 x 60 = _____ j) .11 of 60 is _____

Make up two of your own.

k) _____ x 60 = _____ l) _____ of 60 is _____

2.

1	.5	.25	.125	.1	.05	.01
160						

a) .35 of 160 = _____ b) .15 x 160 is _____

c) .6 of 160 = _____ d) .06 x 160 is _____

e) .3 of 160 = _____ f) .9 x 160 is _____

g) .375 of 160 = _____ h) .09 x 160 is _____

i) .24 of 160 = _____ j) 1.25 x 160 is _____

Make up two of your own.

k) _____ of 160 = _____ l) _____ x 160 is _____

Copyright © 2002 Mathematics Learning

Decimal Benchmark # 6

1.

1	.5	.25	.1	.05	.01	.001
84						

a) .75 x 84 = _____ b) .35 of 84 is _____

c) .15 x 84 = _____ d) .06 of 84 is _____

e) .6 x 84 = _____ f) .95 of 84 is _____

g) .2 x 84 = _____ h) .02 of 84 is _____

i) .002 x 84 = _____ j) 1.25 of 84 is _____

Make up two of your own.

k) _____ x 84 = _____ l) _____ of 84 is _____

2.

1	.5	.25	.125	.1	.05	.01
240						

a) .15 of 240 = _____ b) .75 x 240 is _____

c) 1.2 of 240 = _____ d) .95 x 240 is _____

e) .40 of 240 = _____ f) .6 x 240 is _____

g) .375 of 240 = _____ h) .625 x 240 is _____

i) .51 of 240 = _____ j) 1.25 x 240 is _____

Make up two of your own.

k) _____ of 240 = _____ l) _____ x 240 is _____

Copyright © 2002 Mathematics Learning

Decimal Benchmark # 7

1.

1	.5	.25	.1	.05	.01	.001
50						

a) 2.05 x 50 = _____ b) .75 of 50 is _____

c) .35 x 50 = _____ d) .15 of 50 is _____

e) .11 x 50 = _____ f) .06 of 50 is _____

g) .9 x 50 = _____ h) .26 of 50 is _____

i) .051 x 50 = _____ j) .101 of 50 is _____

Make up two of your own.

k) _____ x 50 = _____ l) _____ of 50 is _____

2.

1	.5	.25	.125	.1	.05	.01
320						

a) .75 of 320 = _____ b) .60 x 320 is _____

c) .4 of 320 = _____ d) .06 x 320 is _____

e) .04 of 320 = _____ f) .95 x 320 is _____

g) .375 of 320 = _____ h) .625 x 320 is _____

i) .875 of 320 = _____ j) 1.25 x 320 is _____

Make up two of your own.

k) _____ of 320 = _____ l) _____ x 320 is _____

Copyright © 2002 Mathematics Learning

Decimal Benchmark # 8

1.

1	.5	.25	.1	.05	.01	.001
20						

a) .3 x 20 = _____ b) .03 of 20 is _____

c) .90 x 20 = _____ d) .09 of 20 is _____

e) .75 x 20 = _____ f) .85 of 20 is _____

g) .999 x 20 = _____ h) 5.05 of 20 is _____

i) .009 x 20 = _____ j) .499 of 20 is _____

Make up two of your own.

k) _____ x 20 = _____ l) _____ of 20 is _____

2.

1	.5	.25	.125	.1	.05	.01
96						

a) .75 of 96 = _____ b) .15 x 96 is _____

c) .6 of 96 = _____ d) .06 x 96 is _____

e) .3 of 96 = _____ f) .9 x 96 is _____

g) .625 of 96 = _____ h) .99 x 96 is _____

i) .375 of 96 = _____ j) 1.05 x 96 is _____

Make up two of your own.

k) _____ of 96 = _____ l) _____ x 96 is _____

Copyright © 2002 Mathematics Learning

Decimal Benchmark # 9

1.

1	.5	.25	.1	.05	.01	.001
70						

a) .75 x 70 = _____ b) .35 of 70 is _____

c) .49 x 70 = _____ d) .005 of 70 is _____

e) 1.51 x 70 = _____ f) .101 of 70 is _____

g) .011 x 70 = _____ h) .995 of 70 is _____

i) .499 x 70 = _____ j) 3.6 of 70 is _____

Make up two of your own.

k) _____ x 70 = _____ l) _____ of 70 is _____

2.

1	.5	.25	.125	.1	.05	.01
200						

a) .60 of 200 = _____ b) .15 x 200 is _____

c) .95 of 200 = _____ d) .51 x 200 is _____

e) .3 of 200 = _____ f) .74 x 200 is _____

g) .007 of 200 = _____ h) .09 x 200 is _____

i) .24 of 200 = _____ j) 1.55 x 200 is _____

Make up two of your own.

k) _____ of 200 = _____ l) _____ x 200 is _____

Copyright © 2002 Mathematics Learning

Decimal Math Squares # 1

1.

.3	.05
.04	.2

2.

.026	.302
.4	.1

3.

.001	.02
.08	.009

4.

.6	.07
.03	.2

5.

32.04	6.2
.3	10.060

6.

.03	.001
.08	.049

7.

.5	.38
.620	

3

8.

.23	
2.9	.08

6

9.

.080	.114
	.306

3.80

Copyright © 2002 Mathematics Learning

Decimal Math Squares # 2

1.

2.1	
2	3.9

10

2.

2.4	1.3
4.7	5.6

3.

1.25	5.5
3.25	6

4.

	2.9
3.08	1.02

8

5.

1.04	
.01	1.2

2.3

6.

3.2	1.10
1.01	2.19

7.

.684	.24
	.06

1

8.

1.4	4
	3.2

9.7

9.

2.98	.01
.2	.01

Copyright © 2002 Mathematics Learning

Decimal Math Squares # 3

1.

.80	.2
.600	.40

_____

2.

	.400
.70	.3

2

3.

.4	.3
.16	.07

_____

4.

.03	
.011	.009

.06

5.

.040	.03
.07	.06

_____

6.

.2	.30
.100	

.900

7.

.3	.3
.3	.3

_____

8.

	.16
.02	.24

.52

9.

1.07	.030
.2	

1.4

Copyright © 2002 Mathematics Learning

Decimal Math Squares # 4

1.

.40	.042
.030	.528

2.

.300	.003
3	.03

3.

2.0	.20
.020	.002

4.

2.7	1.005
5.34	

9.99

5.

.001	5.680
8.32	

20.02

6.

.02	
.3	.680

10

7.

.055	.06
.04	.345

8.

30.3	61.17
39.03	

161

9.

10.106	43.43
	9.894

100

Copyright © 2002 Mathematics Learning

Decimal Math Squares # 5

1.

.19	.003
.007	.81

_____

2.

.999	.36
	.001

10

3.

.900	.010
	.09

3

4.

6.020	
5.009	4.010

20

5.

.006	.30
.04	.104

_____

6.

.04	.006
.104	

.45

7.

3.99	2.05
	.010

7

8.

.071	
.8	.129

100.0

9.

.0101	.2039
.086	.8

_____

Copyright © 2002 Mathematics Learning

Decimal Math Squares # 6

1.

.0005	.005
.05	.5

2.

.0005	.05
.05	.0005

3.

.0407	.0603
.909	.101

4.

.0300	.7009
	.0701

2

5.

.0002	.022
.078	.0078

6.

3.1010	.909
.0500	5.05

7.

.9993	.080
.0200	.0007

8.

.9090	.0500
	3.101

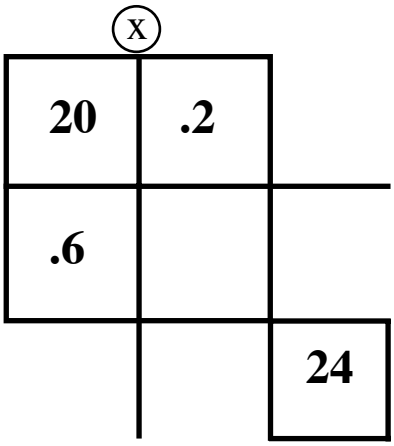
9.11

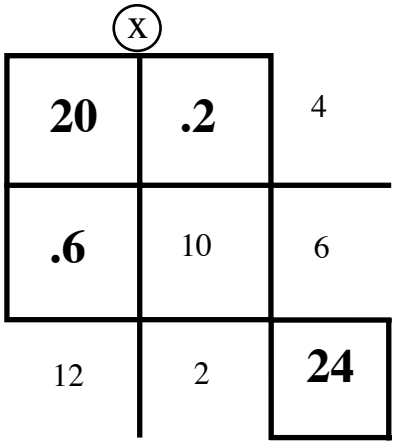
9.

.1234	.0030
.001	.8766

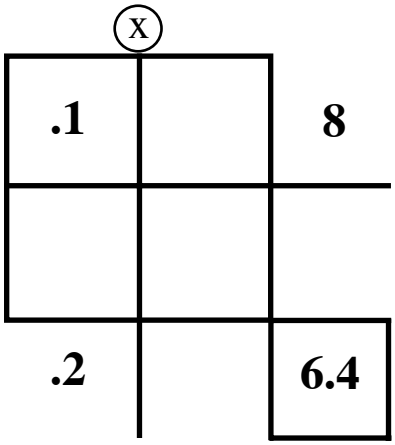
Copyright © 2002 Mathematics Learning

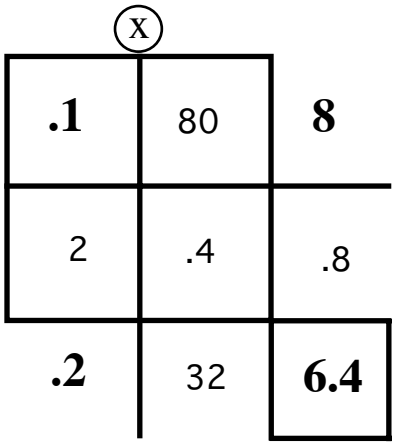
Decimal multiplication Two Ways





Carlos**:**
"Across the top I thought that one- tenth of 20 would be 2 so two-tenths of 20 is 4. Down the right side, 6 times 4 equals 24. Across the middle, I would have to multiply six-tenths by ten to get 6. Two-tenths of 10 is 2. Down the left side, one-tenth of 20 would be 2, so six-tenths of 20 would be 12. 12 x 2 = 24 so it checks."



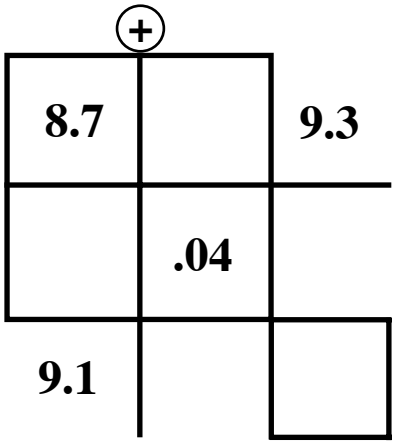


Pat
"Across the top, what could I take one-tenth of and get 8? It would have to be 80. Down the left, 2 x .1 = .2. At first, I did not know what to do with .2 x __ = 6.4. Then I thought that five two-tenths is one and thus 30 x .2 = 6. Just two more two-tenths gives 6.4, so .2 x 32 = 6.4. Down the right side, I figured 8 x 8 = 64 so 8 x .8 would = 6.4. Across the middle 2 x 4 = 8, so it would have to be .4. Now to check, is .4 x 80 = 32? Well, one-tenth of 80 is 8 and I need four of them. I now see that four-tenths of 80 = 32."

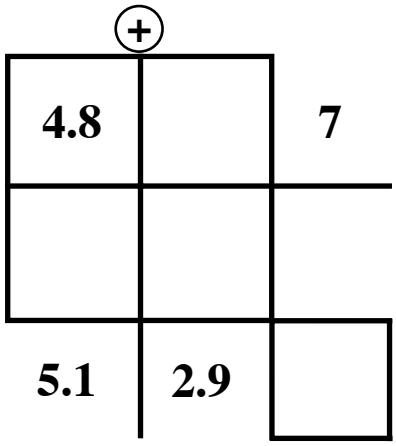
Copyright © 2002 Mathematics Learning

Decimal Two Ways # 1

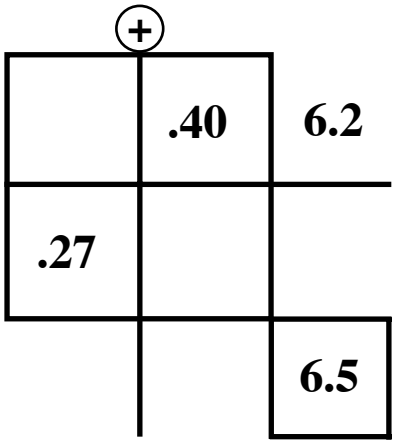
1.



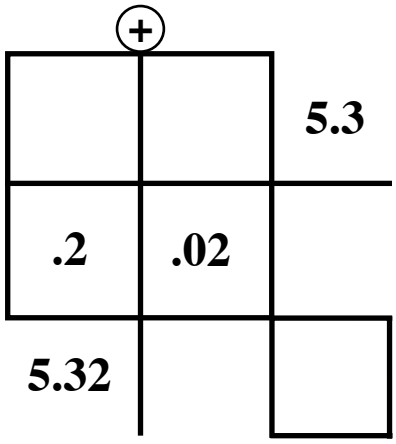
2.



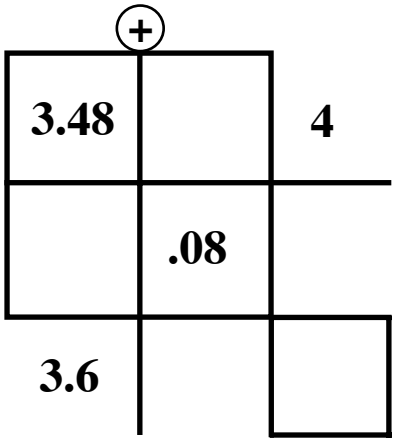
3.



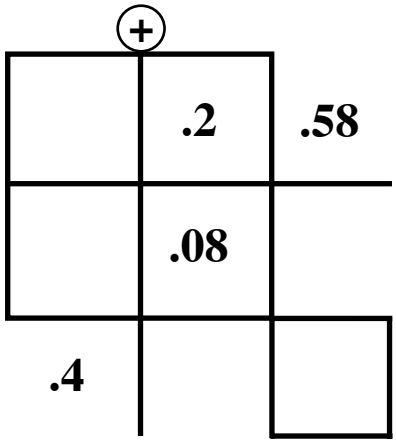
4.



5.



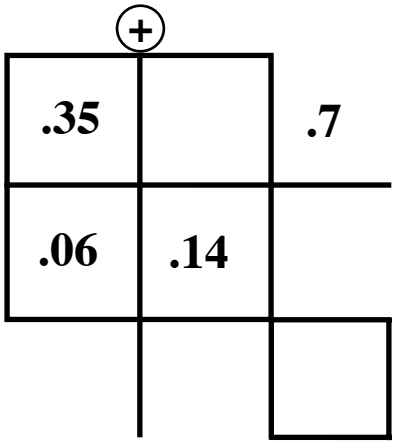
6.



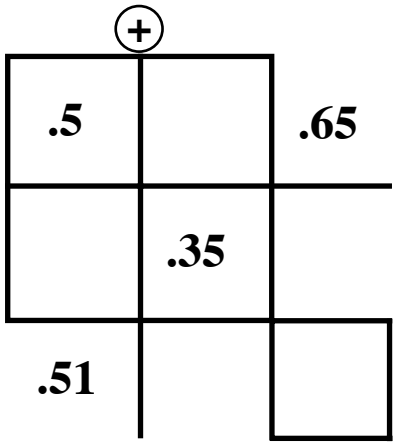
Copyright © 2002 Mathematics Learning

Decimal Two Ways # 2

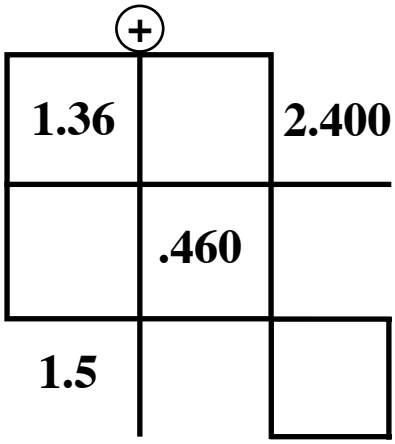
1.



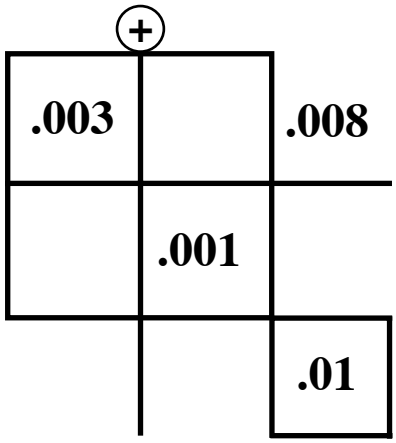
2.



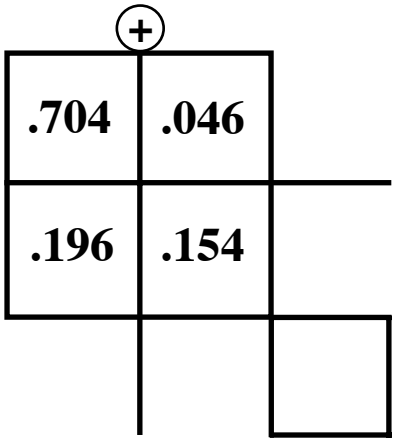
3.



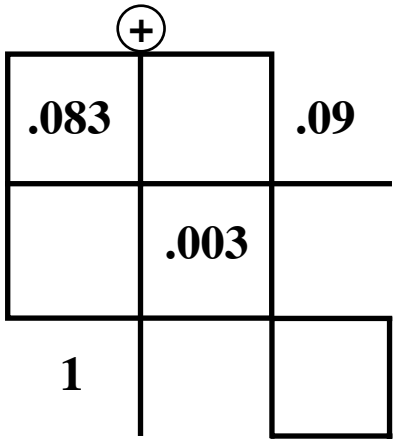
4.



5.



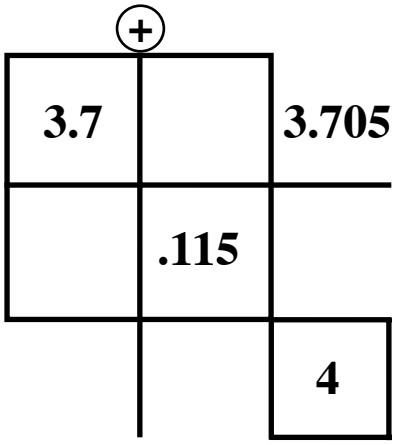
6.



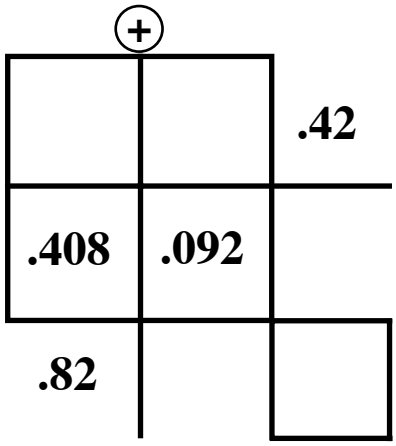
Copyright © 2002 Mathematics Learning

Decimal Two Ways # 3

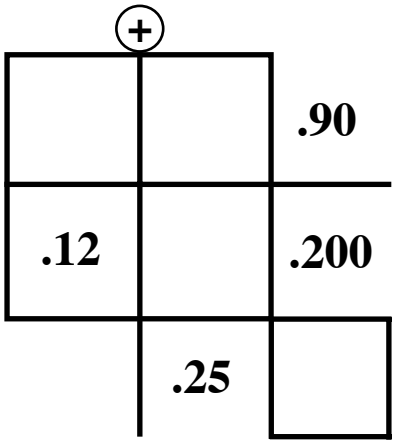
1.



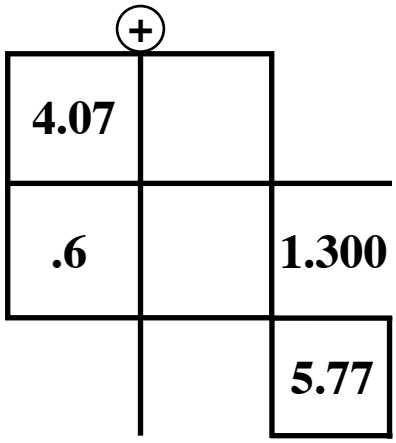
2.



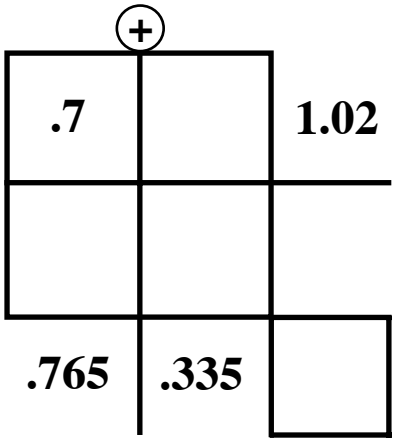
3.



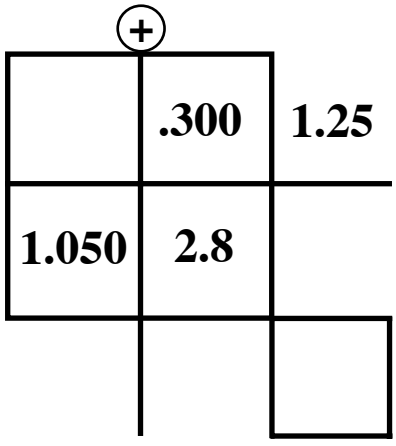
4.



5.



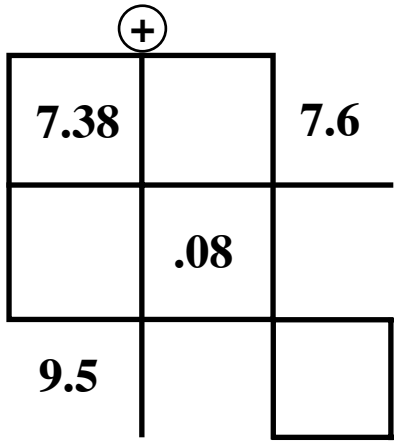
6.



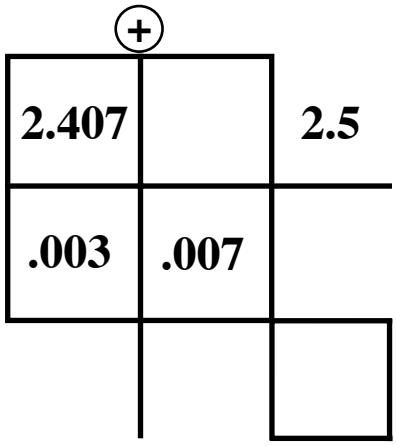
Copyright © 2002 Mathematics Learning

Decimal Two Ways # 4

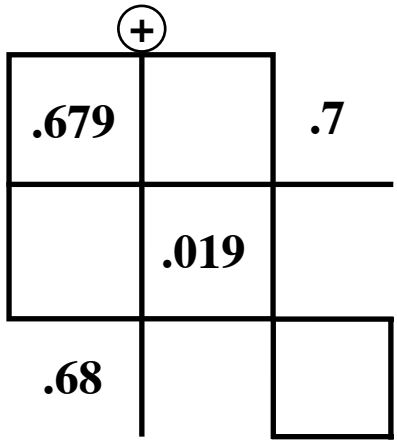
1.



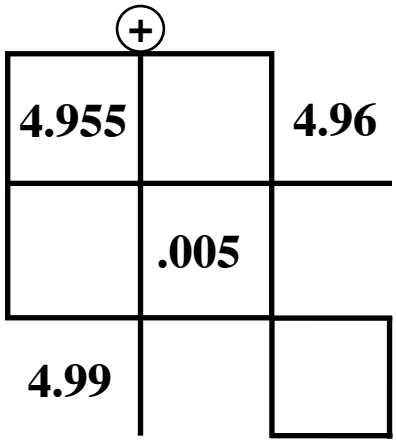
2.



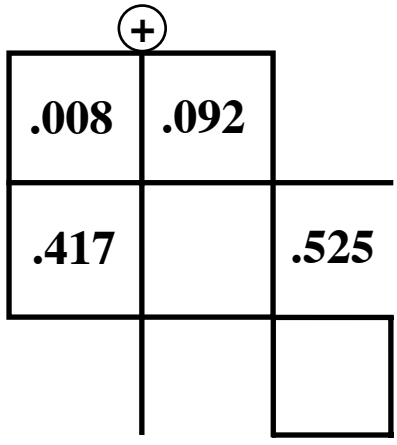
3.



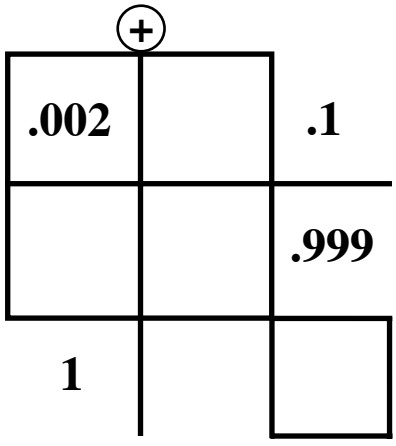
4.



5.



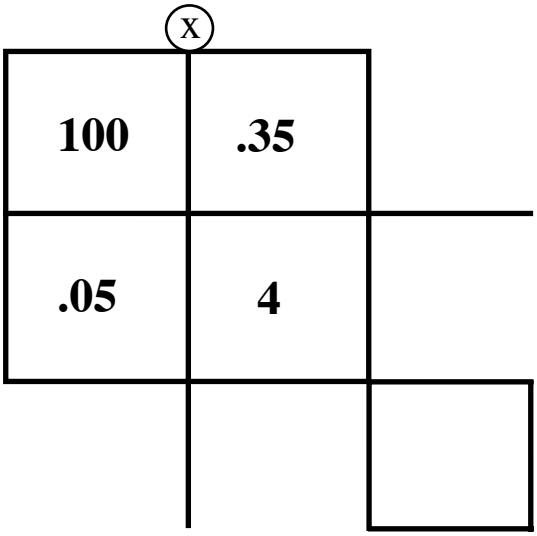
6.



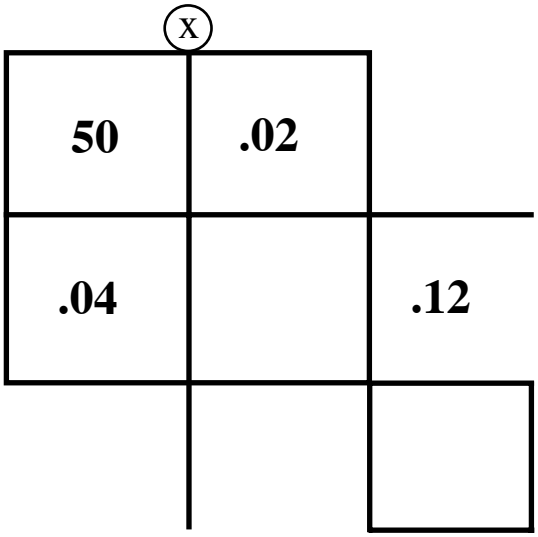
Copyright © 2002 Mathematics Learning

Decimals Two Ways # 5

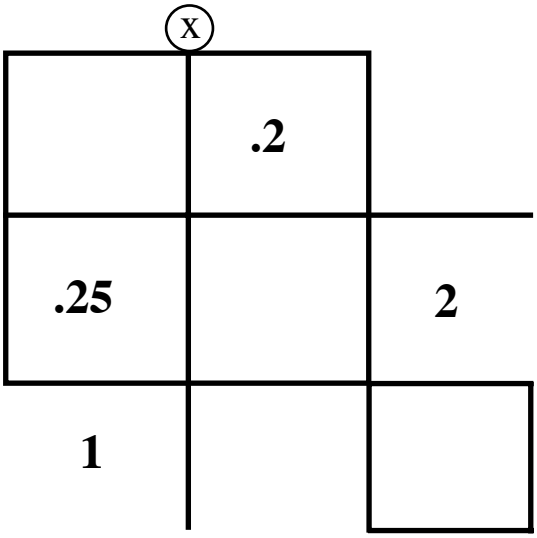
1.



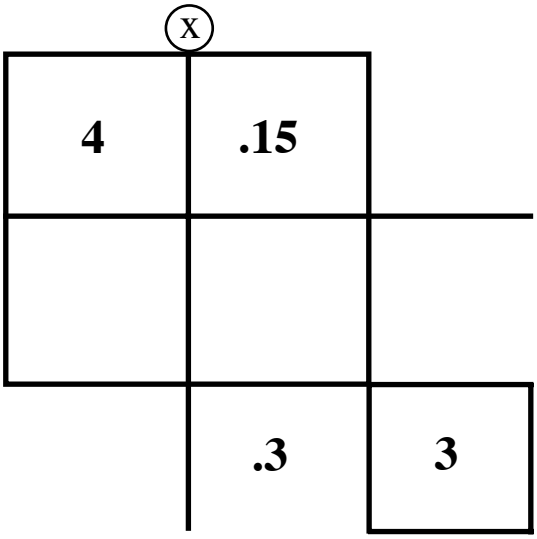
2.



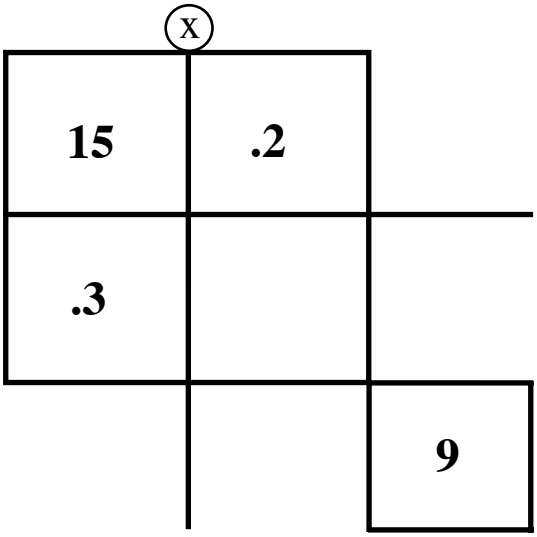
3.



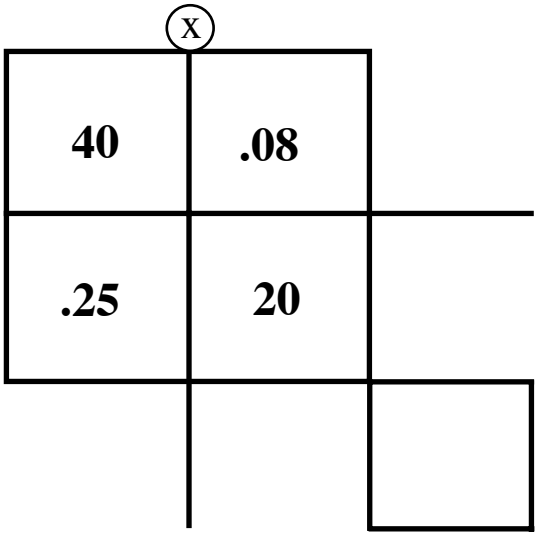
4.



5.



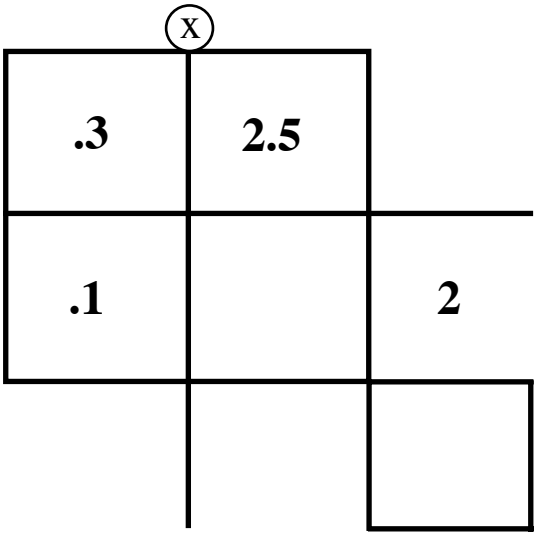
6.



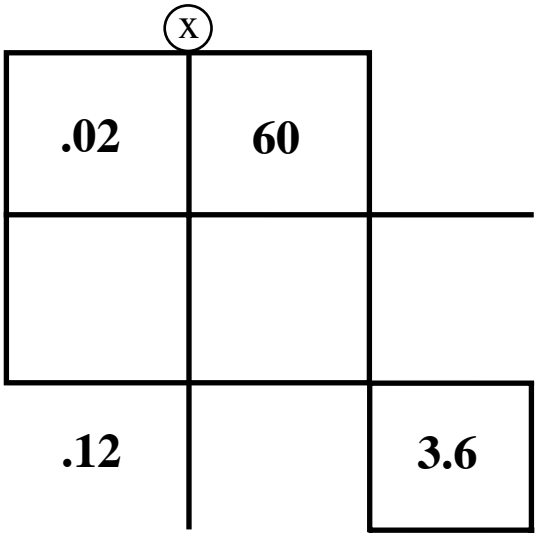
Copyright © 2002 Mathematics Learning

Decimals Two Ways # 6

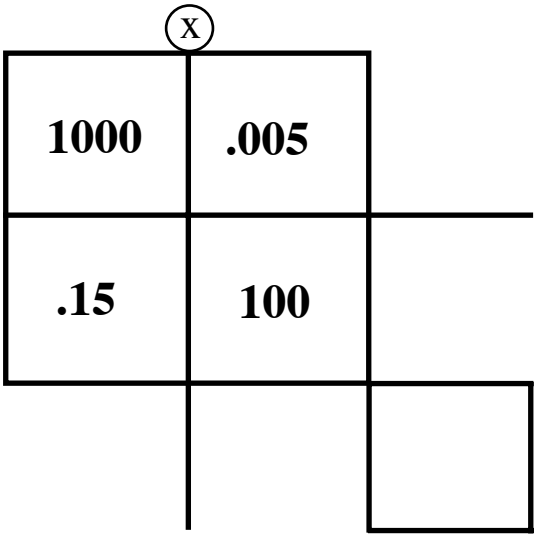
1.



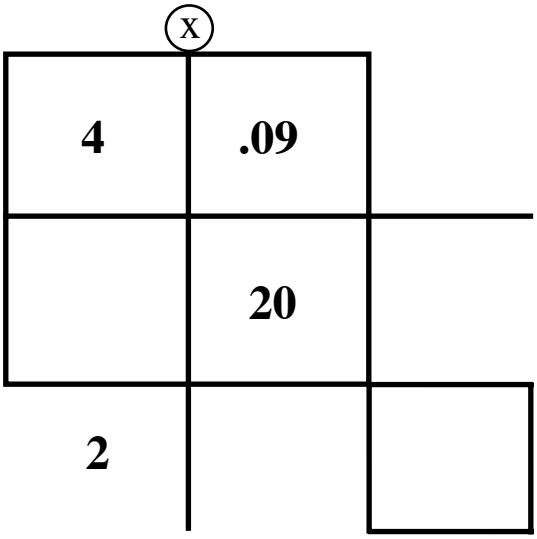
2.



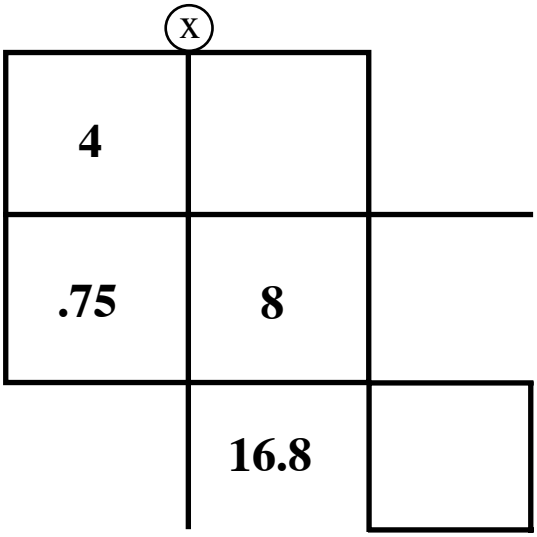
3.



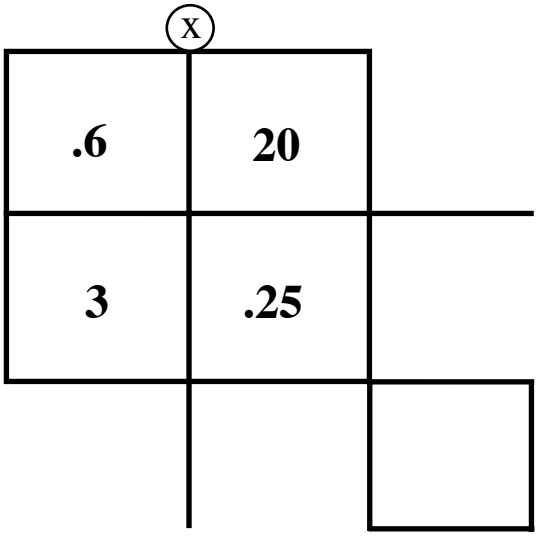
4.



5.



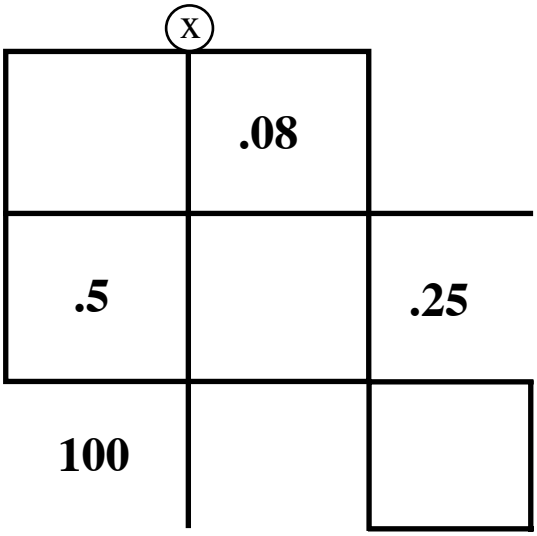
6.



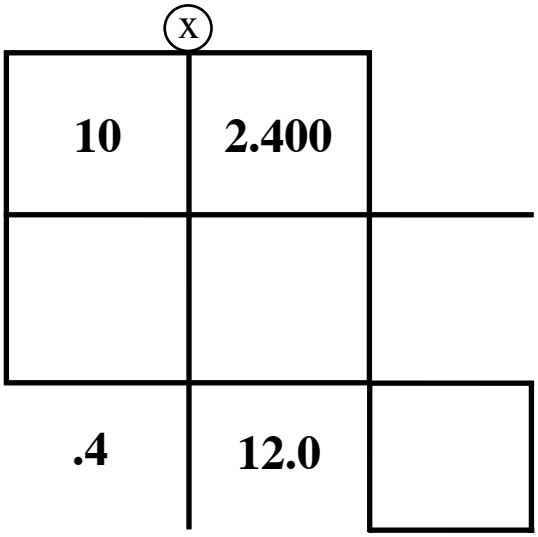
Copyright © 2002 Mathematics Learning

Decimals Two Ways # 7

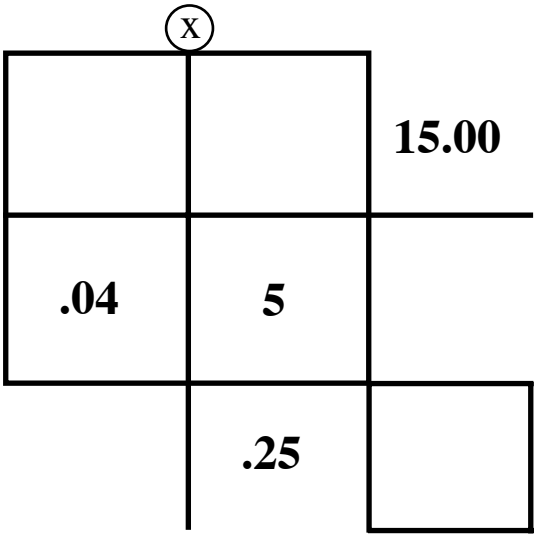
1.



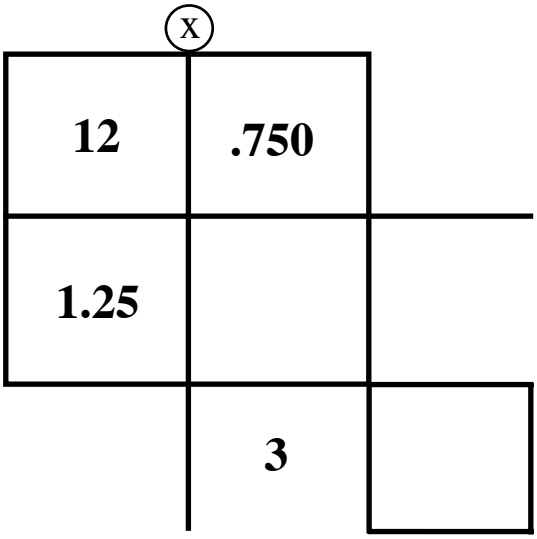
2.



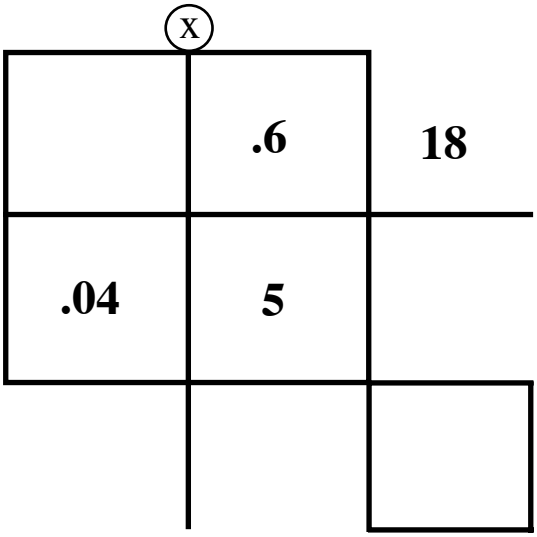
3.



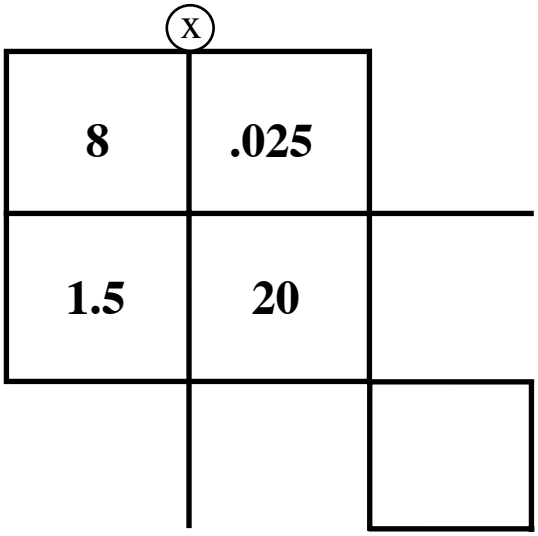
4.



5.



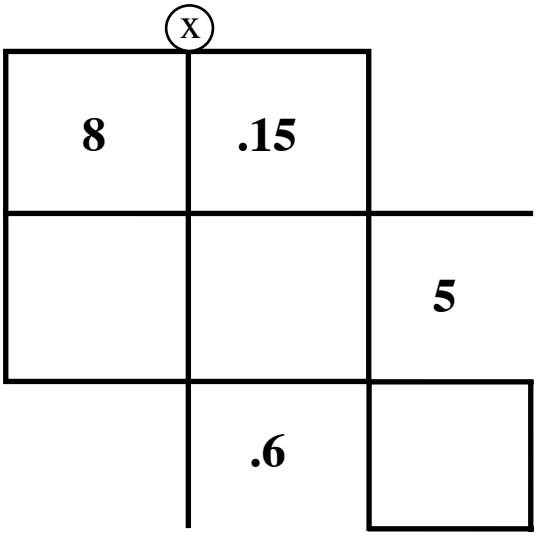
6.



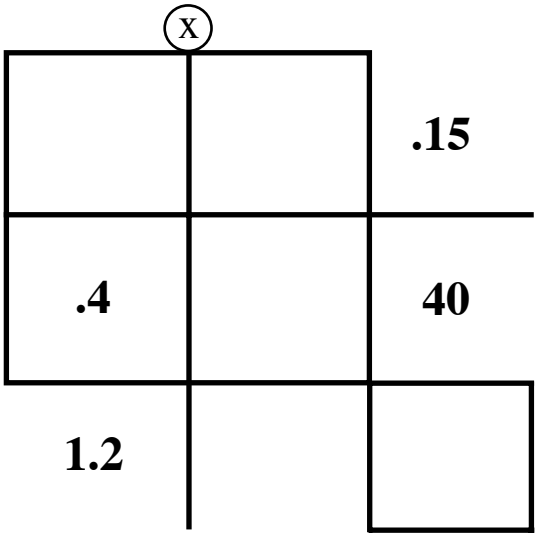
Copyright © 2002 Mathematics Learning

Decimals Two Ways # 8

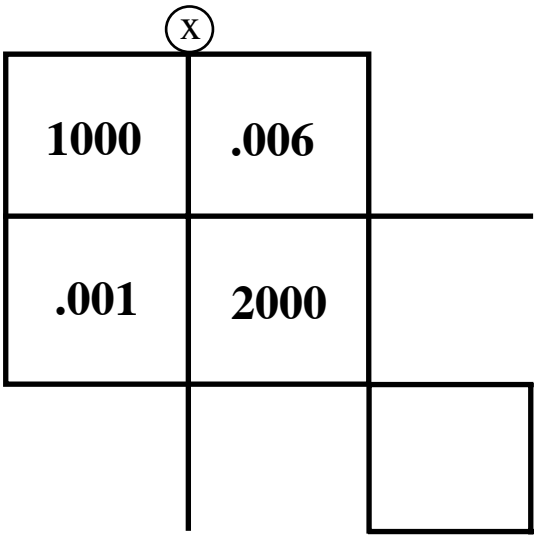
1.



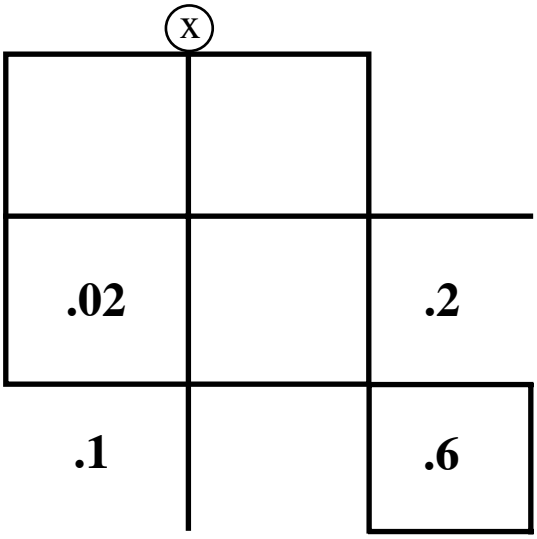
2.



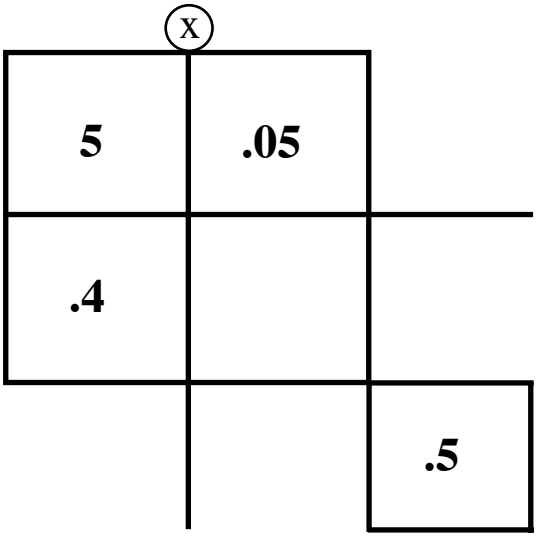
3.



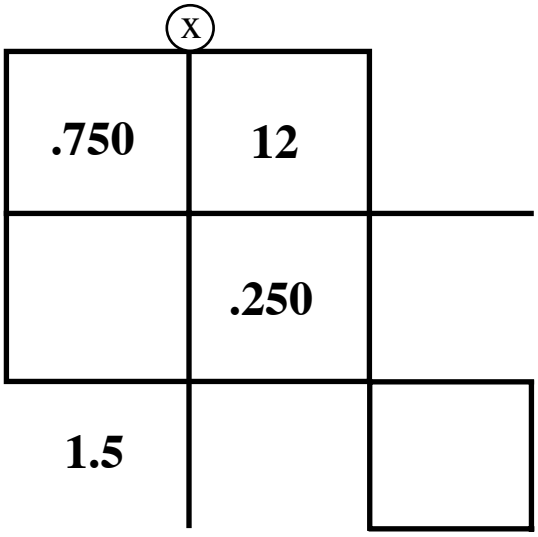
4.



5.



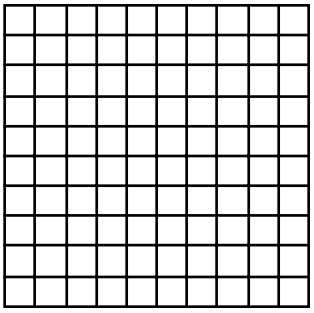
6.



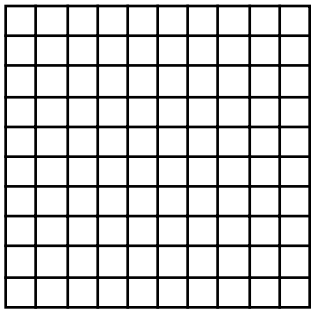
Copyright © 2002 Mathematics Learning

Percent Units

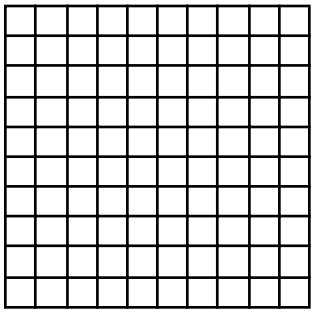
Shade the given percent of the region.



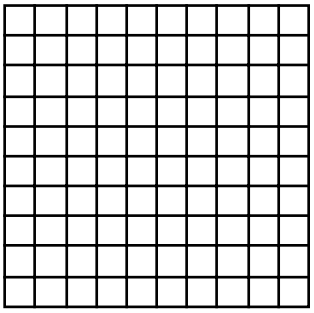
50%



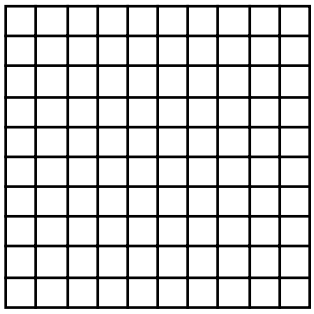
25%



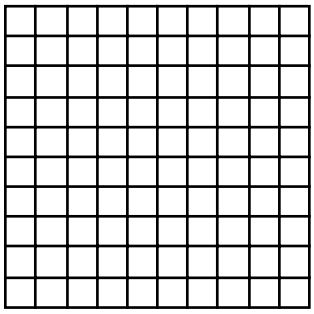
75%



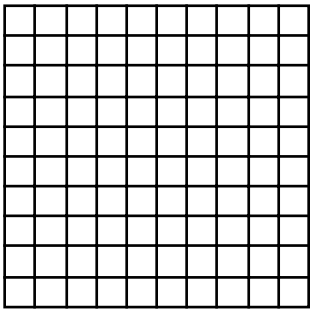
10%



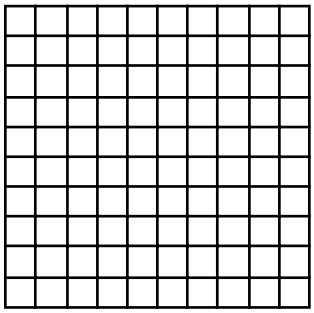
20%



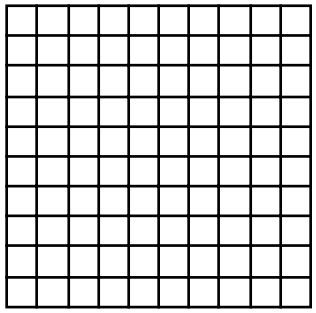
40%



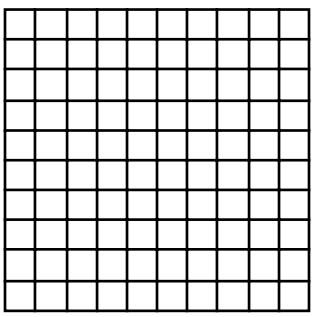
30%



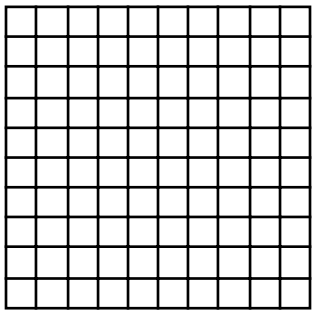
60%



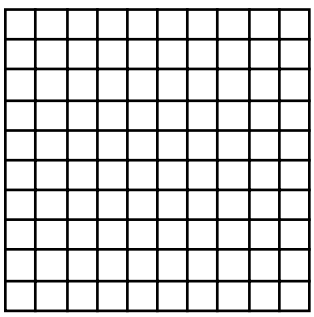
15%



28%



95%

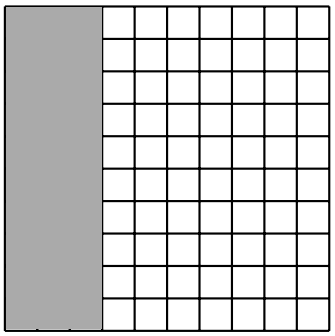


1%

Copyright © 2002 Mathematics Learning

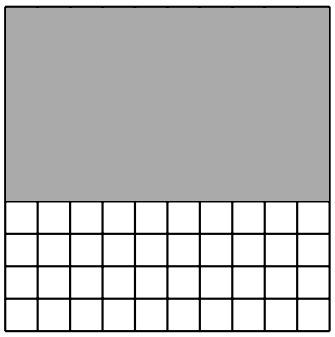
Write the percent of each region that is shaded.

1.



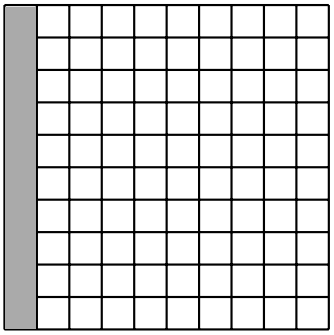
_____

2.



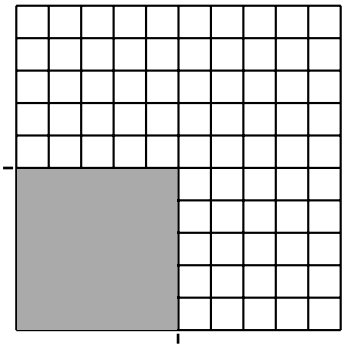
_____

3.



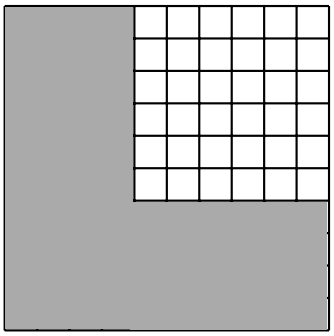
_____

4.



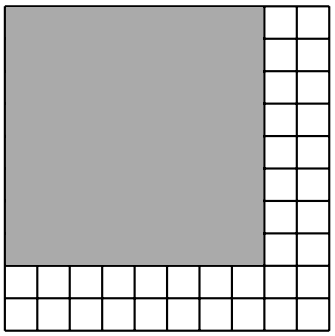
_____

5.



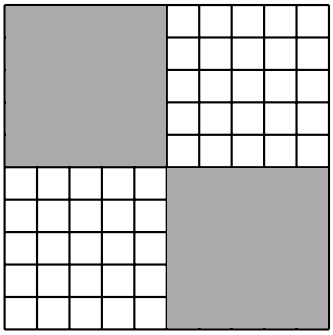
_____

6.



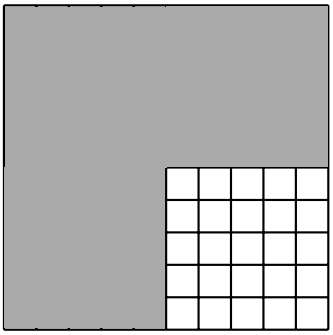
_____

7.



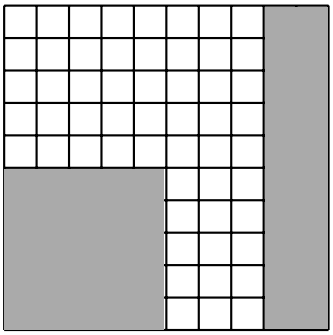
_____

8.



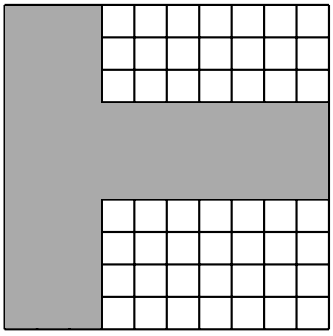
_____

9.



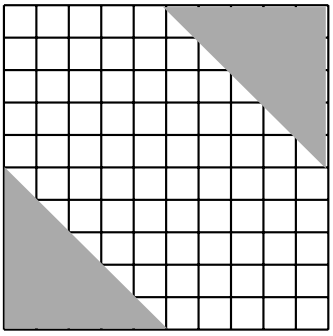
_____

10.



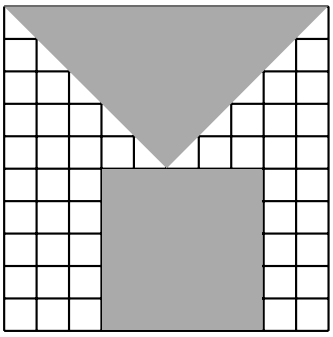
_____

11.



_____

12.

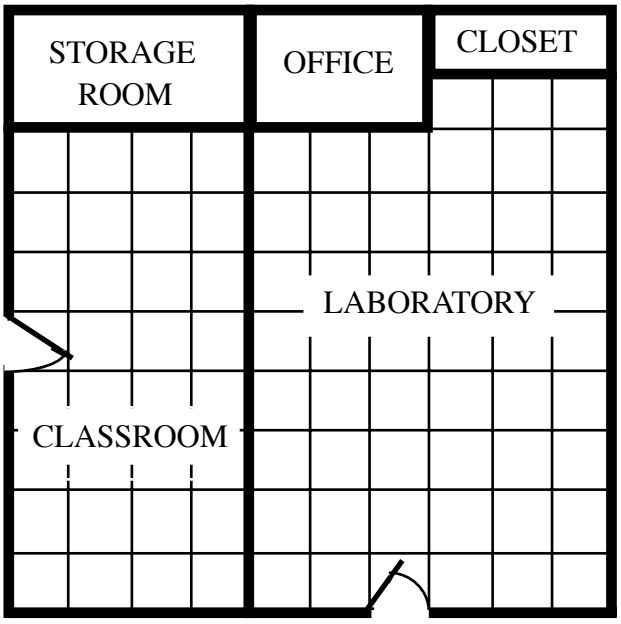


_____

Copyright © 2002 Mathematics Learning

Floor Plan

Write the percent that tells what part of the science area is covered by each section.



1. the office _____
2. the closet _____
3. the classroom _____
4. the laboratory _____
5. the storage room _____
6. the storage room, office, and closet together _____
7. the classroom and laboratory together _____
8. the classroom, office and closet together _____
9. the laboratory and storage room together _____

Copyright © 2002 Mathematics Learning

Benchmark Percents

Mark is a manager of The Athlete Shop and is in charge of pricing sale items. In his job he often needs to mentally compute percentages of a specific dollar amount Here's an example of how Mark does his calculations using "benchmarks":

A jacket is currently priced at $80.00. Mark already knows the following:

1% of $80.00 is $ .80
10% of $80.00 is $ 8.00
25% of $80.00 is $20.00

Using **only** these benchmarks, he combines these amounts to figure other percentages.

2% of $80.00 is $1.60 (double the 1% amt.)
3% of $80.00 is $2.40 (triple the 1% amt.)
4% of $80.00 is $3.20 (4 times the 1% amt. or double the 2% amt.)
5% of $80.00 is $4.00 (5 times the 1% amt. or half of the 10% amt.)
20% of $80.00 is $16.00 (double the 10% amt.)
75% of $80.00 is $60.00 (triple the 25% amt.)
23% of $80.00 is $18.40 (20% + 3% or $16.00 + $2.40)

Try some!

50% of $80.00 is _____ 30% of $80.00 is _____

100% of $80.00 is _____ 60% of $80.00 is _____

90% of $80.00 is _____ 15% of $80.00 is _____

70% of $80.00 is _____ 9% of $80.00 is _____

40% of $80.00 is _____ 49% of $80.00 is _____

12% of $80.00 is _____ 33% of $80.00 is _____

Make up some of your own.

____ % of $80.00 is _____ ____ % of $80.00 is _____

____ % of $80.00 is _____ ____ % of $80.00 is _____

Copyright © 2002 Mathematics Learning

Percent Benchmarks # 1

1.

100%	50%	25%	10%	5%	$2\frac{1}{2}$%	1%
1000						

a) 75% x 1000 = _____ **b)** 15% of 1000 is _____

c) 35% x 1000 = _____ **d)** 60% of 1000 is _____

e) 20% x 1000 = _____ **f)** 30% of 1000 is _____

g) 51% x 1000 = _____ **h)** 26% of 1000 is _____

i) 99% x 1000 = _____ **j)** 105% of 1000 is _____

Make up two of your own.

k) _____ x 1000 = _____ **l)** _____ of 1000 is _____

2.

100%	50%	25%	10%	5%	$2\frac{1}{2}$%	1%
$80						

a) 30% of $80 = _____ **b)** 60% x $80 is _____

c) 90% of $80 = _____ **d)** 15% x $80 is _____

e) 35% of $80 = _____ **f)** 70% x $80 is _____

g) 40% of $80 = _____ **h)** 75% x $80 is _____

i) 125% of $80 = _____ **j)** 24% x $80 is _____

Make up two of your own.

k) _____ of $80 = _____ **l)** _____ x $80 is _____

Copyright © 2002 Mathematics Learning

Percent Benchmarks # 2

1.

100%	50%	25%	10%	5%	$2\frac{1}{2}$%	1%
600						

a) 75% x 600 = _____ b) 35% of 600 is _____

c) 15% x 600 = _____ d) 60% of 600 is _____

e) 49% x 600 = _____ f) 55% of 600 is _____

g) 30% x 600 = _____ h) 20% of 600 is _____

i) 125% x 600 = _____ j) 3% of 600 is _____

Make up two of your own.

k) _____ x 600 = _____ l) _____ of 600 is _____

2.

100%	50%	25%	10%	5%	$2\frac{1}{2}$%	1%
$60						

a) 75% of $60 = _____ b) 55% x $60 is _____

c) 15% of $60 = _____ d) 20% x $60 is _____

e) 40% of $60 = _____ f) 30% x $60 is _____

g) 60% of $60 = _____ h) 90% x $60 is _____

i) $7\frac{1}{2}$% of $60 = _____ j) 35% x $60 is _____

Make up two of your own.

k) _____ of $60 = _____ l) _____ x $60 is _____

Copyright © 2002 Mathematics Learning

Percent Benchmarks # 3

1.

100%	50%	25%	10%	5%	$2\frac{1}{2}$%	1%
200						

a) 75% x 200 = _____ b) 35% of 200 is _____

c) 15% x 200 = _____ d) 60% of 200 is _____

e) 49% x 200 = _____ f) 55% of 200 is _____

g) 30% x 200 = _____ h) 20% of 200 is _____

i) 500% x 200 = _____ j) 2% of 200 is _____

Make up two of your own.

k) _____ x 200 = _____ l) _____ of 200 is _____

2.

100%	50%	25%	10%	5%	$2\frac{1}{2}$%	1%
$40						

a) 30% of $40 = _____ b) 60% x $40 is _____

c) 90% of $40 = _____ d) 15% x $40 is _____

e) 70% of $40 = _____ f) 35% x $40 is _____

g) $7\frac{1}{2}$% of $40 = _____ h) 40% x $40 is _____

i) $12\frac{1}{2}$% of $40 = _____ j) 225% x $40 is _____

Make up two of your own.

k) _____ of $40 = _____ l) _____ x $40 is _____

Copyright © 2002 Mathematics Learning

Percent Benchmarks # 4

1.

100%	50%	25%	10%	5%	$2\frac{1}{2}$%	1%
300						

a) 75% x 300 = _____ b) 15% of 300 is _____

c) 35% x 300 = _____ d) 60% of 300 is _____

e) 11% x 300 = _____ f) 30% of 300 is _____

g) 51% x 300 = _____ h) 26% of 300 is _____

i) 99% x 300 = _____ j) 20% of 300 is _____

Make up two of your own.

k) _____ x 300 = _____ l) _____ of 300 is _____

2.

100%	50%	25%	10%	5%	$2\frac{1}{2}$%	1%
$18						

a) 60% of $18 = _____ b) 30% x $18 is _____

c) 75% of $18 = _____ d) 15% x $18 is _____

e) 95% of $18 = _____ f) 9% x $18 is _____

g) 150% of $18 = _____ h) 40% x $18 is _____

i) $7\frac{1}{2}$% of $18 = _____ j) 49% x $18 is _____

Make up two of your own.

k) _____ of $18 = _____ l) _____ x $18 is _____

Copyright © 2002 Mathematics Learning

Percent Benchmarks # 5

1.

100%	50%	25%	10%	5%	$2\frac{1}{2}$%	1%
160						

a) 75% x 160 = _____ b) 15% of 160 is _____

c) 40% x 160 = _____ d) 60% of 160 is _____

e) 20% x 160 = _____ f) 30% of 160 is _____

g) $7\frac{1}{2}$% x 160 = _____ h) 35% of 160 is _____

i) $12\frac{1}{2}$% x 160 = _____ j) 125% of 160 is _____

Make up two of your own.

k) _____ x 160 = _____ l) _____ of 160 is _____

2.

100%	50%	25%	10%	5%	$2\frac{1}{2}$%	1%
$50						

a) 30% of $50 = _____ b) 60% x $50 is _____

c) 90% of $50 = _____ d) 15% x $50 is _____

e) 70% of $50 = _____ f) 9% x $50 is _____

g) 40% of $50 = _____ h) 49% x $50 is _____

i) $7\frac{1}{2}$% of $50 = _____ j) 125% x $50 is _____

Make up two of your own.

k) _____ of $50 = _____ l) _____ x $50 is _____

Copyright © 2002 Mathematics Learning

Percent Benchmarks # 6

1.

100%	50%	25%	10%	5%	$2\frac{1}{2}$%	1%
240						

a) 75% x 240 = _____ b) 15% of 240 is _____

c) 35% x 240 = _____ d) 60% of 240 is _____

e) 20% x 240 = _____ f) 30% of 240 is _____

g) $7\frac{1}{2}$% x 240 = _____ h) 90% of 240 is _____

i) $12\frac{1}{2}$% x 240 = _____ j) 250% of 240 is _____

Make up two of your own.

k) _____ x 240 = _____ l) _____ of 240 is _____

2.

100%	50%	25%	10%	5%	$2\frac{1}{2}$%	1%
$36						

a) 30% of $36 = _____ b) 60% x $36 is _____

c) 90% of $36 = _____ d) 15% x $36 is _____

e) 35% of $36 = _____ f) 70% x $36 is _____

g) $12\frac{1}{2}$% of $36 = _____ h) 40% x $36 is _____

i) $7\frac{1}{2}$% of $36 = _____ j) 125% x $36 is _____

Make up two of your own.

k) _____ of $36 = _____ l) _____ x $36 is _____

Copyright © 2002 Mathematics Learning

Percent Benchmarks # 7

1.

100%	50%	25%	10%	5%	$2\frac{1}{2}$%	1%
320						

a) 75% x 320 = _____ **b)** 15% of 320 is _____

c) 35% x 320 = _____ **d)** 60% of 320 is _____

e) 125% x 320 = _____ **f)** 30% of 320 is _____

g) $7\frac{1}{2}$% x 320 = _____ **h)** 26% of 320 is _____

i) $12\frac{1}{2}$% x 320 = _____ **j)** 120% of 320 is _____

Make up two of your own.

k) _____ x 320 = _____ **l)** _____ of 320 is _____

2.

100%	50%	25%	10%	5%	$2\frac{1}{2}$%	1%
$24						

a) 30% of $24 = _____ **b)** 60% x $24 is _____

c) 20% of $24 = _____ **d)** 15% x $24 is _____

e) 75% of $24 = _____ **f)** 35% x $24 is _____

g) 40% of $24 = _____ **h)** 90% x $24 is _____

i) $12\frac{1}{2}$% of $24 = _____ **j)** 250% x $24 is _____

Make up two of your own.

k) _____ of $24 = _____ **l)** _____ x $24 is _____

Copyright © 2002 Mathematics Learning

Percent Benchmarks # 8

1.

100%	50%	25%	10%	5%	$2\frac{1}{2}$%	1%
400						

a) 75% x 400 = _____ b) 15% of 400 is _____

c) 35% x 400 = _____ d) 60% of 400 is _____

e) 3% x 400 = _____ f) 30% of 400 is _____

g) 51% x 400 = _____ h) 26% of 400 is _____

i) 99% x 400 = _____ j) 200% of 400 is _____

Make up two of your own.

k) _____ x 400 = _____ l) _____ of 400 is _____

2.

100%	50%	25%	10%	5%	$2\frac{1}{2}$%	1%
$72						

a) 75% of $72 = _____ b) 55% x $72 is _____

c) 15% of $72 = _____ d) 60% x $72 is _____

e) 35% of $72 = _____ f) 2% x $72 is _____

g) 40% of $72 = _____ h) 49% x $72 is _____

i) $12\frac{1}{2}$% of $72 = _____ j) 125% x $72 is _____

Make up two of your own.

k) _____ of $72 = _____ l) _____ x $72 is _____

Copyright © 2002 Mathematics Learning

Percent Benchmarks # 9

1.

100%	50%	25%	10%	5%	$2\frac{1}{2}$%	1%

a) 74% x 80 = _____ b) 55% of 60 is _____

c) 49% x 200 = _____ d) 110% of 90 is _____

e) 10% x _____ = 45 f) 25% of _____ is 85

g) 500% x _____ = $1.05 h) 80% of _____ is $64

i) ____% x 80 = 20 j) ____% of 60 is 90

k) ____% x $64 = $3.20 l) ____% of 70 is 21

m) What percent of the cards in a 52 card deck are not face cards?

2.

100%	50%	25%	10%	5%	$2\frac{1}{2}$%	1%

a) 0.5% x 400 = _____ b) 95% of 60 is _____

c) 26% x 44 = _____ d) 175% of 8 is _____

e) 1% x _____ = $3.08 f) 600% of _____ is $15

g) 15% x _____ = 45 h) 40% of _____ is 6

i) ____% x 75 = 60 j) ____% of 35 is 7

k) ____% x $4 = $1.60 l) ____% of $4.50 is $9

m) If 32% percent of a number is 128, find 40% of the number.

Copyright @ 2002 Mathematics Learning

Percent Benchmarks # 10

1.

100%	50%	25%	10%	5%	$2\frac{1}{2}$%	1%

a) 900% x 7 = _____ b) 99% of 480 is _____

c) 35% x $28 = _____ d) 101% of $10 is _____

e) 50% x _____ = $3.55 f) 20% of _____ is $7.20

g) 2% x _____ = 8.4 h) 300% of _____ is 12.75

i) ____% x $1.04 = 52¢ j) ____% of 80 is 12

k) ____% x 300 = 210 l) ____% of 66 is 22

m) Comfort Shoe Store marks up its prices 20%. What is the store's profit on a pair of shoes that sell for $144.00?

2.

100%	50%	25%	10%	5%	$2\frac{1}{2}$%	1%

a) 65% x 30 = _____ b) 45% of $16 is _____

c) 250% x 4 = _____ d) 26% of 104 is _____

e) 8% x _____ = $3.20 f) 40% of _____ is $2.80

g) 3% x _____ = 12 h) 200% of _____ is .5

i) ____% x $7 = $6.30 j) ____% of 48 is 36

k) ____% x 250 = 150 l) ____% of $9.70 is 97¢

m) Darci got a 10% discount on a pair of jeans that was originally priced at $44.90. How much did Darci pay for the jeans?

Copyright @ 2002 Mathematics Learning

Percent Benchmarks # 11

1.

100%	50%	25%	10%	5%	$2\frac{1}{2}$%	1%

a) 25% x 20¢ = _____ b) 5% of $401 is _____

c) 600% x 35 = _____ d) 49% of 120 is _____

e) 7% x _____ = $6.30 f) 175% of _____ is 21

g) 30% x _____ = 75 h) 6% of _____ is $42

i) ____% x $3.90 = $1.95 j) ____% of 400 is 160

k) ____% x 20 = 14 l) ____% of 4 is 20

m) Abel paid $18.90 for a hat that was on sale. He paid 75% of the regular price. What was the regular price of the hat?

2.

100%	50%	25%	10%	5%	$2\frac{1}{2}$%	1%

a) 10% x $1.20 = _____ b) 12.5% of 42 is _____

c) 90% x 670 = _____ d) 225% of 32 is _____

e) 35% x _____ = 70 f) 9% of _____ is 54¢

g) 125% x _____ = 5 h) 60% of _____ is $240

i) ____% x $21 = $10.50 j) ____% of 45 is 30

k) ____% x 240 = 180 l) ____% of $24 is $3

m) In the class election, 660 of the 750 students voted. What percent of the students voted? What percent of the students did not vote?

Copyright @ 2002 Mathematics Learning

Percent Benchmarks # 12

1.

100%	50%	25%	10%	5%	$2\frac{1}{2}$%	1%

a) 105% x $17 = _____ b) 4% of 60 is _____

c) 51% x 200 = _____ d) 11% of 540 is _____

e) 750% x _____ = 30 f) 75% of _____ is 15

g) 0.5% x _____ = 18¢ h) 5% of _____ is $12.50

i) ____% x $25 = $7.50 j) ____% of 400 is 240

k) ____% x $45 = $9 l) ____% of 6 is 15

m) Laura spent $4\frac{1}{2}$ days of her 10-day vacation at Disney World. What percent of her vacation did she spend at Disney World?

2.

100%	50%	25%	10%	5%	$2\frac{1}{2}$%	1%

a) 15% x 61 = _____ b) 2% of $8 is _____

c) 40% x 205 = _____ d) 350% of 2 is _____

e) 90% x _____ = $2.70 f) 70% of _____ is 28

g) 4% x _____ = 6 h) 800% of _____ is $20

i) ____% x $48 = $12.00 j) ____% of 55 is 44

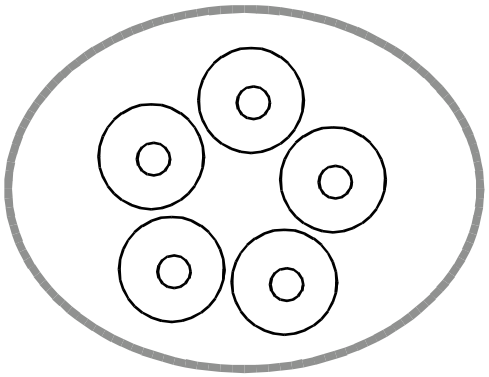
k) ____% x 50 = 45 l) ____% of $210 is $10.50

m) Matt bought a $100 boom box at a 10% discount and then paid a a 10% sales tax. How much did Matt pay for the boom box?

Copyright @ 2002 Mathematics Learning

Thinking in Percents

1. Given the plate of doughnuts shown, answer the following questions.

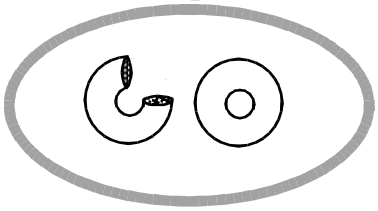


a. Jessie ate 3 doughnuts. What percent of the plate of doughnuts did she eat? _____

b. Jarrod ate 1 1/2 doughnuts. What percent of the plate of doughnuts did he eat? _____

c. What percent of the plate of doughnuts is left? _____

2. Two doughnuts were left on a plate in the cafeteria as shown below.



a. What percent of the partially eaten doughnut appears to be missing? _____

b. What percent of the **plate** of doughnuts is missing (counting both doughnuts)? _____

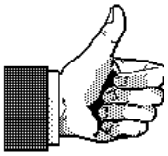
c. If three of us want to split equally the remaining doughnuts, what percent of the plate of doughnuts could we each have? _____

Copyright © 2002 Mathematics Learning

Estimating and Graphing Percents

1. The results of a Student Council election for President held last week were as follows:

Sandy received 224 votes
Doug received 150 votes
Alex received 76 votes



Approximately what percent of the total number of votes did each candidate receive?

Sandy _____ Doug _____ Alex _____

Draw a circle graph to show the voting results for class president. Title and label your graph.

2. The class wants to raise a total of $1,250 this year for the children's home. They raised $620 from magazine sales and $130 from dances.

Approximately what **percent** of their goal of $1,250 have they raised?

_____

Approximately what **percent** of their goal did the dances bring in?

_____

Approximately what **percent** of their goal does the class still need to raise?

_____

Draw a circle graph to show the parts in percent: magazine sales, dances, and amount still needed. Title the graph and label each part.

Copyright © 2002 Mathematics Learning

3. Passing a state budget is a long and complicated procedure. At times this process can nearly shut down the state government. One year a house of representatives rejected the governor's budget proposal and developed their own version. There were 74 democrats and 46 republicans in the house that summer.

If 44 democrats and 35 republicans voted to pass the house version of the budget and all members voted, answer the following questions:

Approximately what percent of the **democrats** voted yes? _____

Approximately what percent of the **republicans** voted yes? _____

Approximately what percent of all representatives voted yes? _____

4. Arnold works as a roofer for a construction company 40 hours a week and makes $6.00 an hour. Federal income and social security taxes take approximately 15% of his income. Most people spend approximately 30% of their income on a place to live. **Estimate** how much Arnold has to spend on an apartment if he uses the 30% guideline.

Total Income per week $_____ Taxes $_____

Amt. for housing $_____

5. Arnold recently married and decided to enter a training program to become a welder. When he completes the program, he will be making $13.50 an hour. If he works 40 hours a week as a welder and taxes amount to about 20% of his income, **estimate** how much he will have available to spend on housing (still using the 30% guideline).

Total Income per week $_____ Taxes $_____

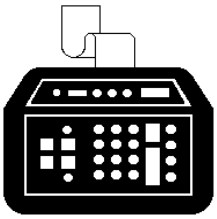
Amt. for housing $_____

After paying taxes and housing, how much money will Arnold have left?

_____

Copyright © 2002 Mathematics Learning

Calculating Percent



Refer to problems 1-3 on the previous pages to do the following problems.

1. In some elections, where there are more than two candidates, a run-off election is held between the top two vote getters if one of the candidates does not receive more than 50% of the votes. Look at the Student Council election results and determine whether or not a run-off election is necessary. Use a **calculator** to determine the percent as closely as possible.

Sandy received what percent? _____ Alex received what percent? _____

Doug received what percent? _____ Is a run-off election necessary? _____

2. The class must file a financial report. The report must have results to the **nearest whole percent**. Based on the information given in problem 2 from the previous assignment, use your **calculator** to find the following percentages.

Percent of the total goal from magazine sales? _____

Percent of the total goal from dances? _____

What percent of the money must still be raised to meet this goal? _____

3. A governor can veto the a legislative budget. It takes 67% of the votes to override the veto. Assuming that all members of the house vote and nobody changes their mind, use a **calculator** to determine if the house can override the veto.

What percent of yes votes does the house have? _____

Will the veto override attempt succeed? Explain _____

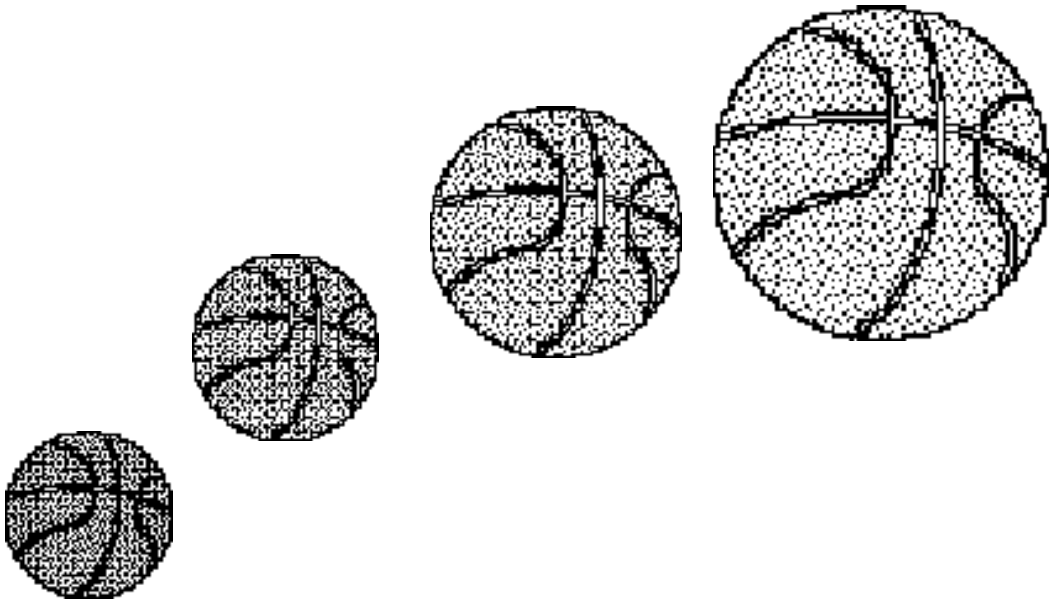
_____

Copyright © 2002 Mathematics Learning

Percents and Basketball Statistics

Percentages are used in basketball to indicate a players field goal average. The "Dream Team" worksheet provides students with some statistics on well known players. Many of the percentages will need to be rounded and should promote some discussion.

One of the more interesting ways of involving students in working with percents is to arrange to show a video of the first half of an actual game. Ask your basketball coach if he/she has a video to watch or tape a recent game from a college or pro team that is televised. Assign each student one or more players to watch and keep a tally of the shots made and shots attempted on the sheet provided. Follow this activity with a **class discussion.**



Copyright © 2002 Mathematics Learning

“Dream Team” and Percents

Given some statistics from one of the Exhibition games during the historic 1992 Summer Olympics, can you determine the following field goal percentages (to the nearest whole percent) of several of the players from the U.S. Basketball "Dream Team"?

Player	FG	FGA	% of shots made	% of shots missed
Jordan	6	11	_____	_____
Bird	6	12	_____	_____
Mullins	7	13	_____	_____
Johnson	4	9	_____	_____
Barkley	5	12	_____	_____
Laettner	3	4	_____	_____
Ewing	6	9	_____	_____
Malone	4	13	_____	_____

How many shots would Bird have made if he attempted 100 baskets? What about Malone and Laettner?

Bird _____ Malone _____ Laettner _____

Describe the relationship between the percentage of shots missed and the percentage of shots made.

_____

Find the team totals for each category.

FG	FGA	% of shots made	% of shots missed
_____	_____	_____	_____

Copyright © 2002 Mathematics Learning

Viewing a Basketball Game

Name _____

Game _____

Team _____

Select a team and record the information below.

Player	Shots Made	Shots Missed	Total Shots Attempted	Percent of shots Made	Percent of shots Missed

Copyright © 2002 Mathematics Learning

Teacher Notes on "Calculator-ing" Percents

The purpose of the following activity is to familiarize students with the % mode on a calculators.

Before introducing this activity, a class warm-up might include discussing ways of writing down calculator steps for basic arithmetic operations.

Warm-up 1

Say to the class "Add 17 and 8 on your calculator. What answer did you get? Now, write down each step that you took. Be specific."

Examples: 17 [+] 8 [=] **OR** 8 [+] 17 [=] **OR** 17 [+] 8 [+]

Warm-up 2

Say to the class, "Multiply 9 and 5 , then subtract 10 from the result. What is your answer? Record each step carefully."

Examples: 9 [x] 5 [=] [-] 10 **OR** 9 [x] 5 [-] 10 [=]

Make up more sample problems as needed. The introductory problem on the following page is intended for students to experiment with their calculators until they find a way to use the % key and come up with a correct response. Possible recorded steps for this problem are shown below.

49.95 x 40 % =

40 % x 49.95 =

***40 x 49.95 %**

*Some students will begin to see that **when** the % key is used, the decimal point moves 2 place; we want to encourage students to act meaningfully.

Copyright © 2002 Mathematics Learning

"Calculator-ing" Percents

Laurel wants to determine the exact amount of discount she will receive on a pair of jeans that is advertised as 40% off the regular price. Using the percent button on her calculator, she finds the discount to be $19.98. If the regular price is $49.95, show the steps that Laurel took on her calculator to determine the amount of discount. Be specific!

_____

Use your calculator to solve these problems.

1. Regular price: $7.00
   Discount 10% _____
   Sale Price $ _____

2. Regular price: $65.00
   Discount 20% _____
   Sale Price $ _____

3. Regular price: $125.00
   Discount: 50% _____
   Sale Price $ _____

4. Regular price: $48.50
   Discount 30% _____
   Sale Price $ _____

5. Regular price: $520.00
   Discount: 25% _____
   Sale Price $ _____

6. Regular price: $280.00
   Discount: 60% _____
   Sale Price $ _____

7. Total restaurant bill: $45.30
   Tip: 20% _____

8. Total restaurant bill: $72.00
   Tip: 15% _____

9. Total sales: $350.00
   Sales tax 6%: _____

10. Total sales: $15,750
    Sales tax 7%: _____

11. Total sales: $1250.00
    Sales tax 6.5%: _____

12. Total sales: $432.50
    Sales tax 4.5% _____

13. In 1982, a belt sold for $11.50. Ten years later, the price of the belt increased by 80%. How much **more** did it sell for in 1992? How much would the belt cost in 1992?

Copyright © 2002 Mathematics Learning

Discount

A pair of Guess jeans regularly sells for $65.95. It it is now selling at a 20% discount. Find the approximate discount first by using compatible numbers for the dollar amounts and/or the percents. Then use a calculator to determine the exact amount of discount and the sale price.

Step 1

$65.95 is approx. $70.00
10% of $70 is $7
20% of $70 is $14 (double the 10% amt.)
$14.00 is the **approx**. discount

Step 2

To figure exactly 20% of $65.95, we need our calculators. Experiment with the % button on your calculator until you come up with $13.19.

Step 3

Reg. price: $65.95 Amt. of Disc.: $13.19 Sale Price: $65.95 - $13.19 = $52.76

	Actual	Approx.
Reg. price:	$18.90	_____
Discount:	50%	
Amt. of Disc:	_____	_____
Sale Price:	_____	_____

	Actual	Approx.
Reg. price:	$47.80	_____
Discount:	30%	
Amt. of Disc:	_____	_____
Sale Price:	_____	_____

	Actual	Approx.
Reg. price:	$137.90	_____
Discount:	50%	
Amt. of Disc:	_____	_____
Sale Price:	_____	_____

	Actual	Approx.
Reg. price:	$92.40	_____
Discount:	30%	
Amt. of Disc:	_____	_____
Sale Price:	_____	_____

	Actual	Approx.
Reg. price:	$203.00	_____
Discount:	40%	
Amt. of Disc:	_____	_____
Sale Price:	_____	_____

	Actual	Approx.
Reg. price:	$37.20	_____
Discount:	25%	
Amt. of Disc:	_____	_____
Sale Price:	_____	_____

Copyright © 2002 Mathematics Learning

Problem Solving with Percents

Solve the following problems. Show your work neatly and clearly and be able to **verify** your solution(s).

1. Which television would cost you less money? A $429 television set with a 20% discount or a television set with no discount priced at $359?

2. The Miami Heat basketball team has won 13 games and lost 4 games. The Orlando Magic team has won 22 games and lost 9 games. About how many games would each team win if they each play 100 games? Who would have the better record?

3. You and a guest have eaten in a restaurant which had excellent service. Your bill comes to $23.00. If you leave exactly a 15% tip, what would the amount of the tip be?

4. A taxi driver gets to keep 25% of his fares. One day his fares totaled $358. How much money did the taxi driver keep?

5. You purchase an item for $28.50. You must also pay 6% sales tax. How much change should you receive if you give a salesperson a $50 bill?

Copyright © 2002 Mathematics Learning

Fraction-Decimal-Percent Two Ways # 1

1. **Write 0.5 as a percent.**

2. **Write $\frac{3}{4}$ as a decimal.**

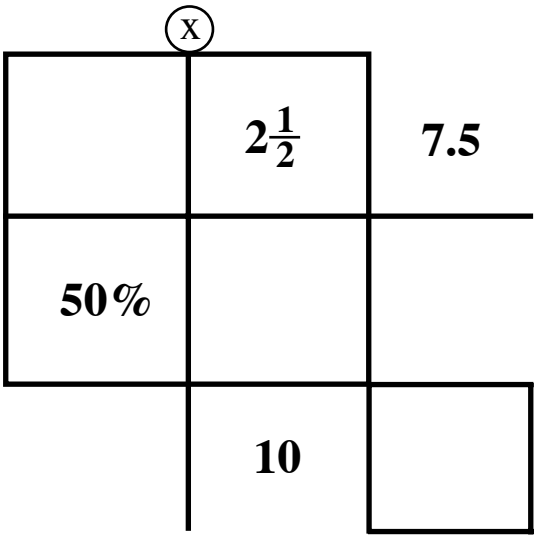
3. **Write 0.25 as a fraction in simplest terms.**

4. **Change 10% to a fraction in simplest terms.**

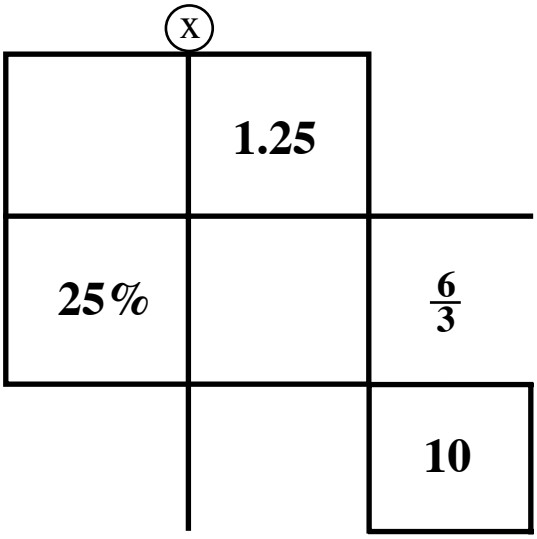
5. **Write $\frac{1}{5}$ as percent.**

6. **Change 37% to a decimal.**

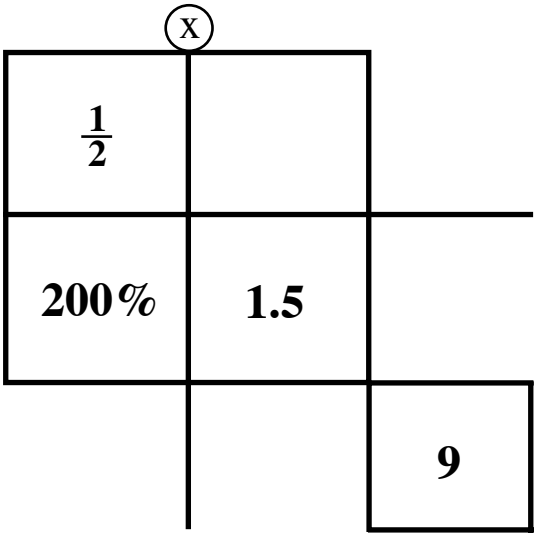
7.



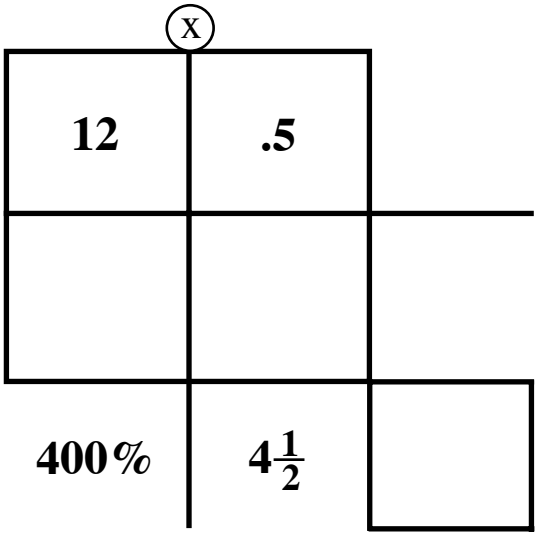
8.



9.



10.



Copyright © 2002 Mathematics Learning

Fraction-Decimal-Percent Two Ways # 2

1. **Write 0.05 as a percent.**

2. **Write $\frac{1}{4}$ as a decimal.**

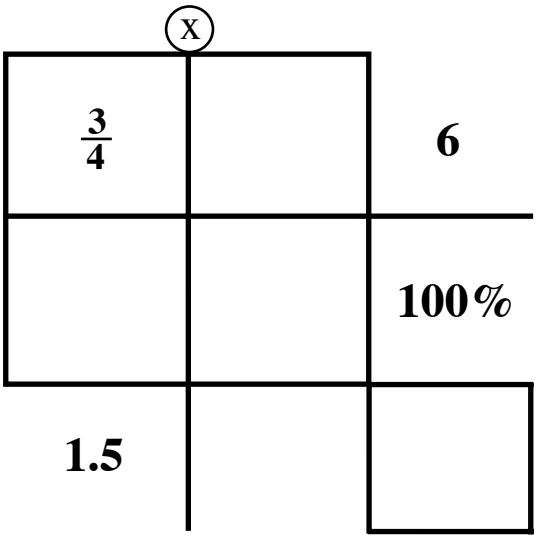
3. **Write 0.4 as a fraction in simplest terms.**

4. **Change 60% to a fraction in simplest terms.**

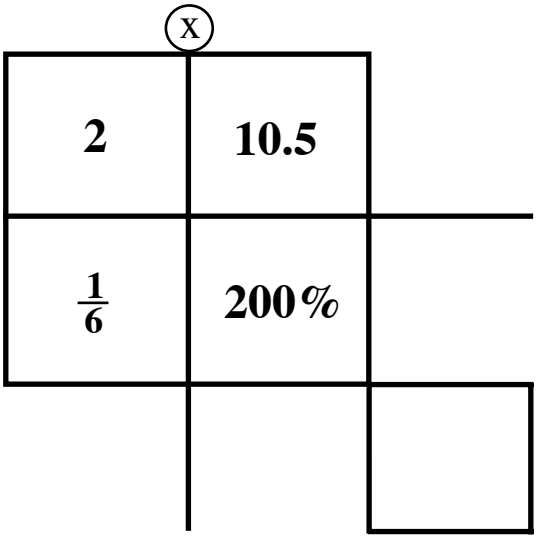
5. **Write $\frac{3}{5}$ as percent.**

6. **Change 110% to a decimal.**

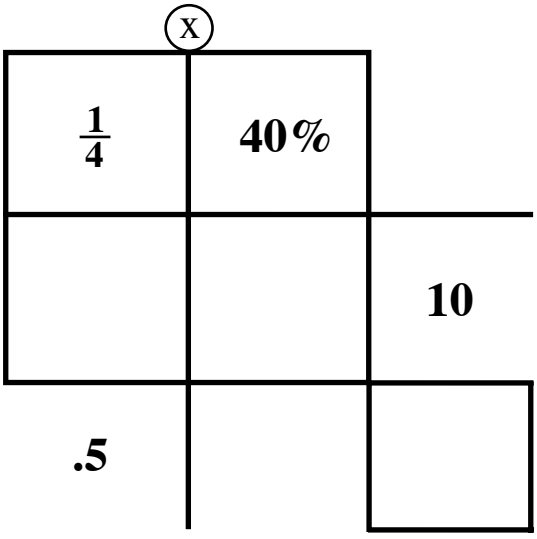
7.



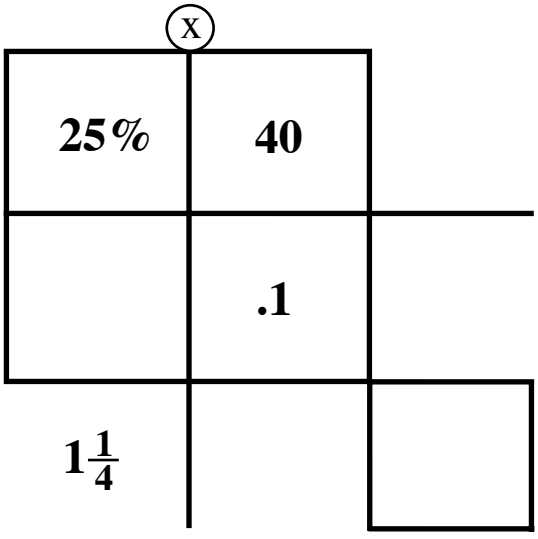
8.



9.



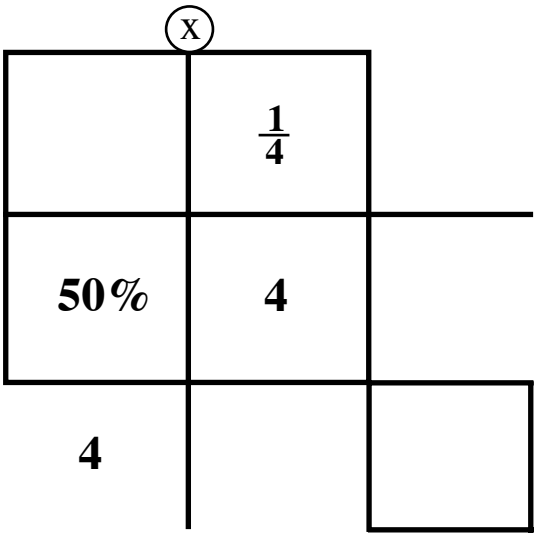
10.



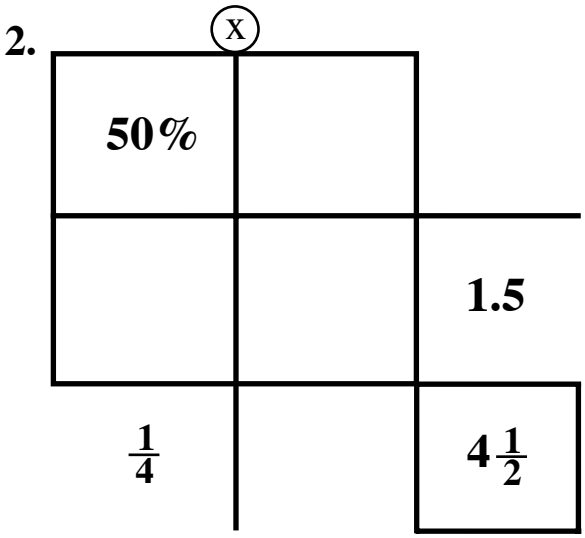
Copyright © 2002 Mathematics Learning

Fraction-Decimal-Percent Two Ways # 3

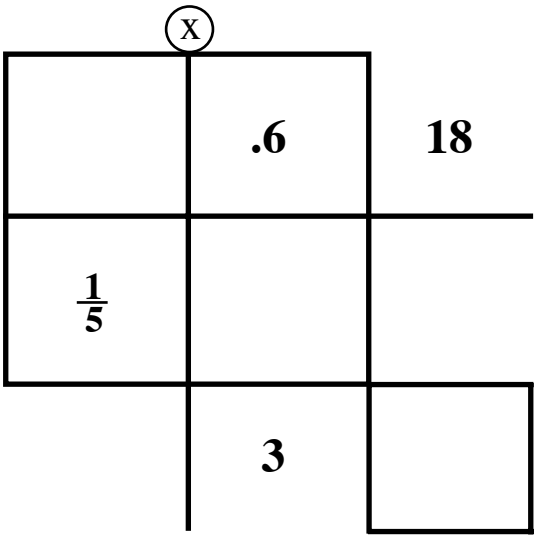
1.



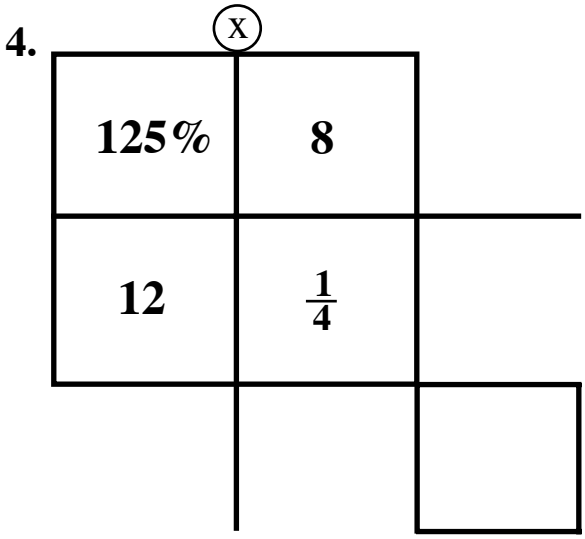
2.



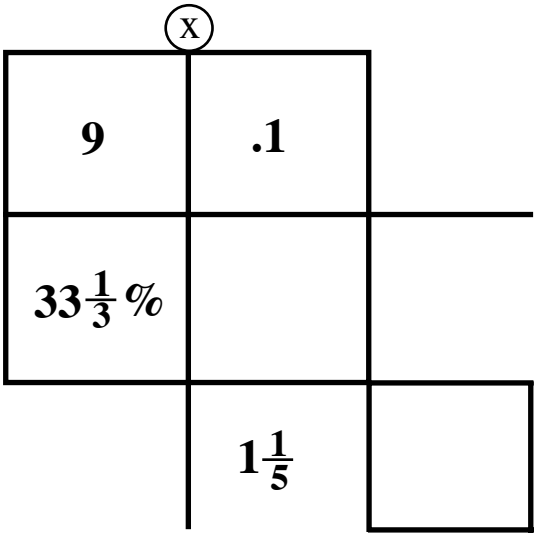
3.



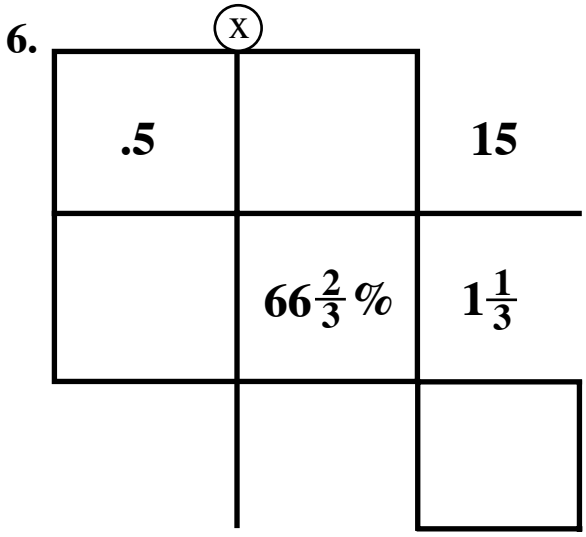
4.



5.



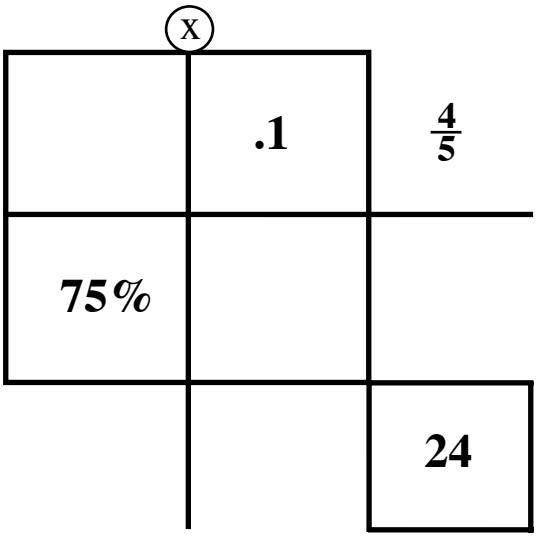
6.



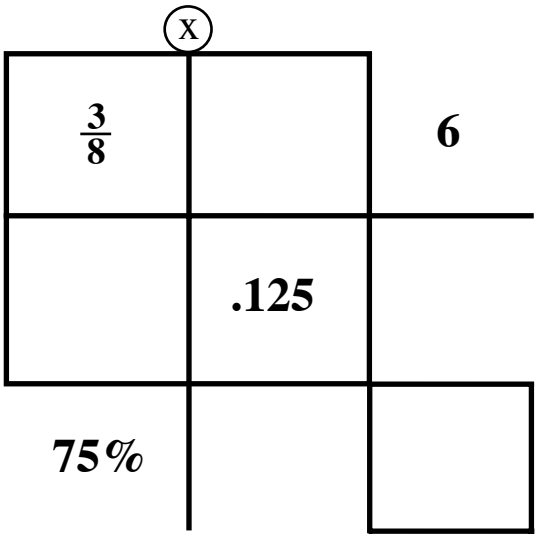
Copyright © 2002 Mathematics Learning

Fraction-Decimal-Percent Two Ways # 4

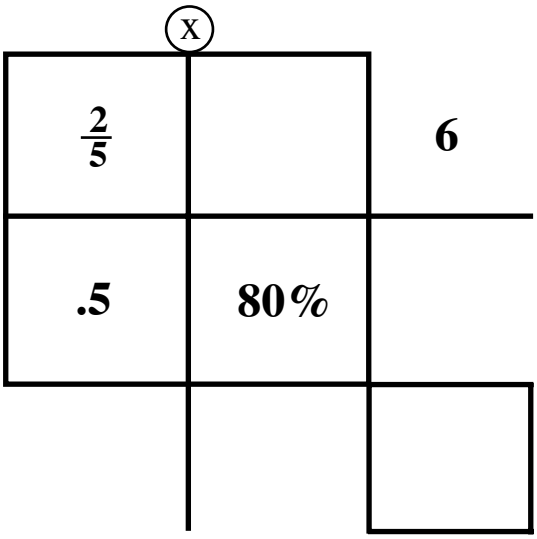
1.



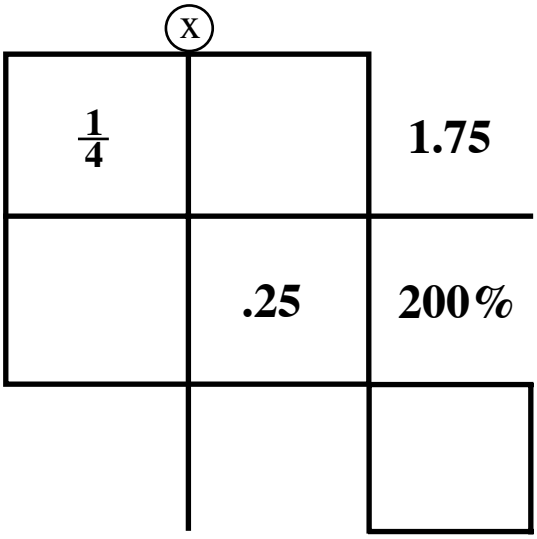
2.



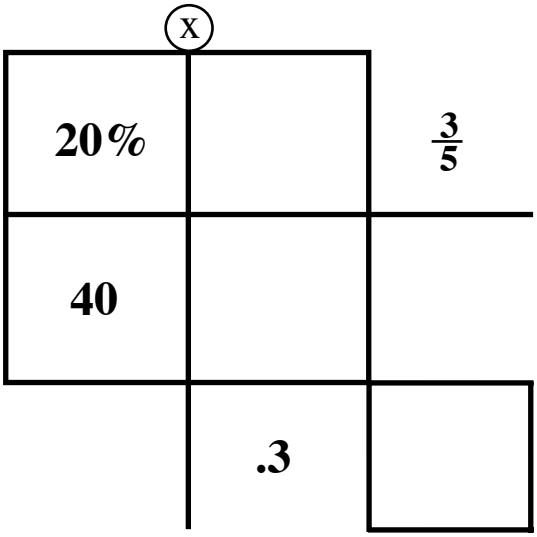
3.



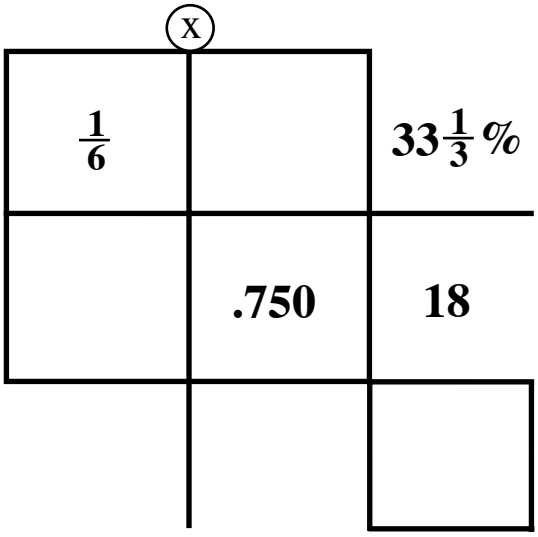
4.



5.



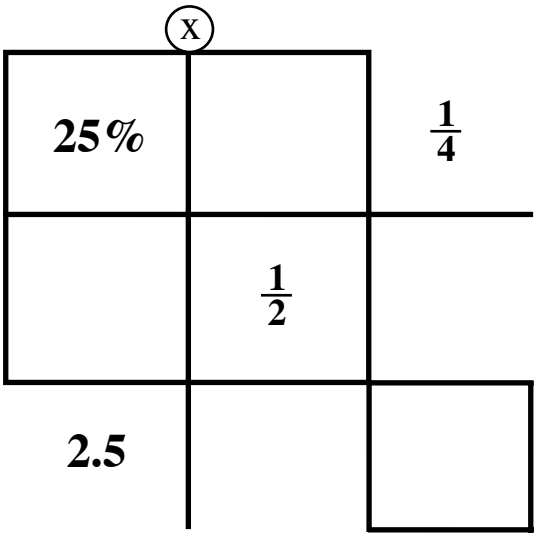
6.



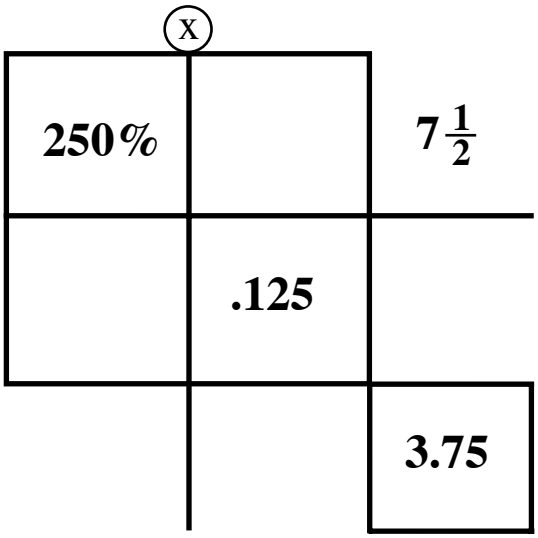
Copyright © 2002 Mathematics Learning

Fraction-Decimal-Percent Two Ways # 5

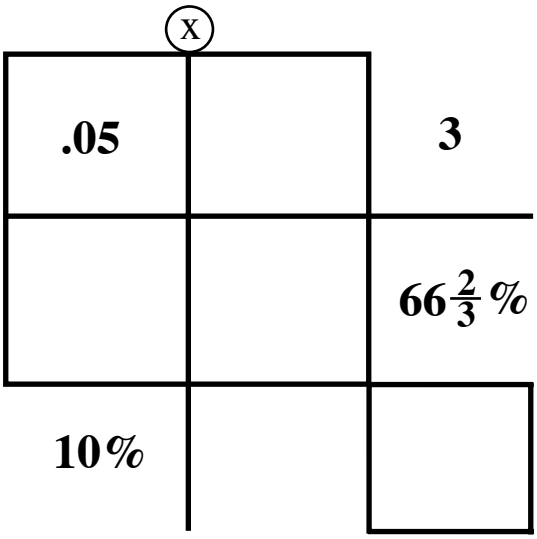
1.



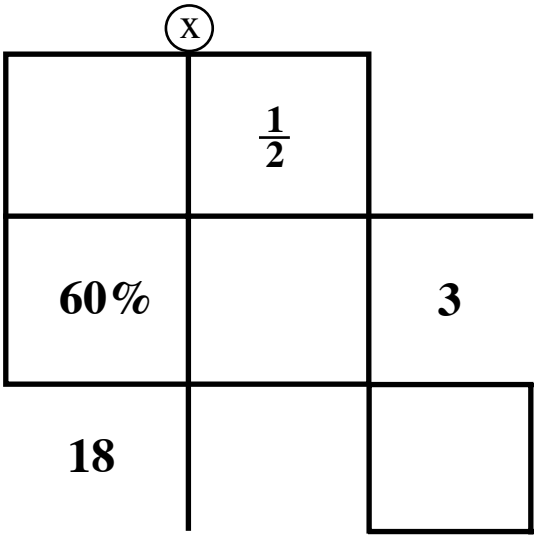
2.



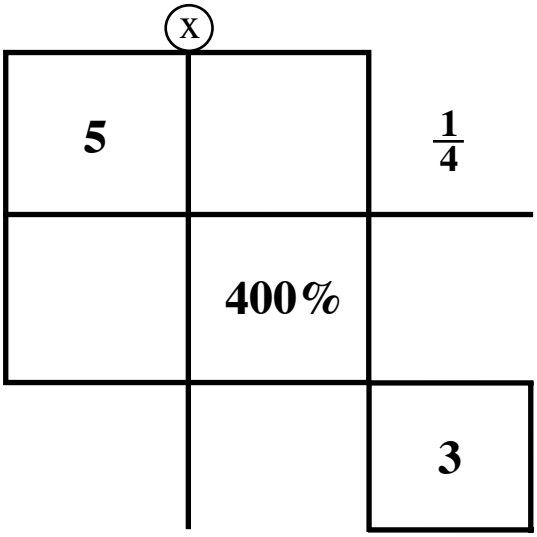
3.



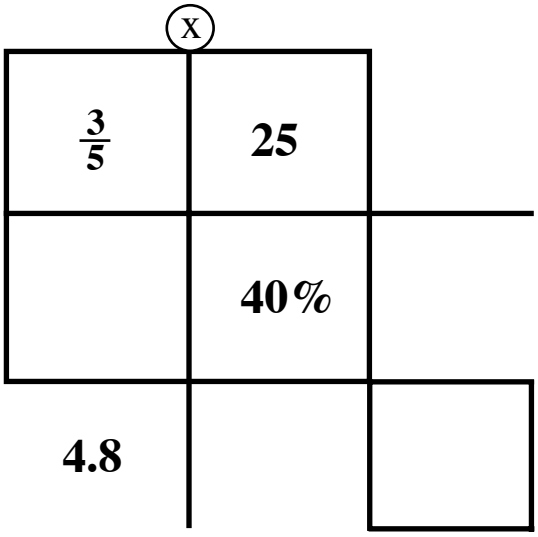
4.



5.



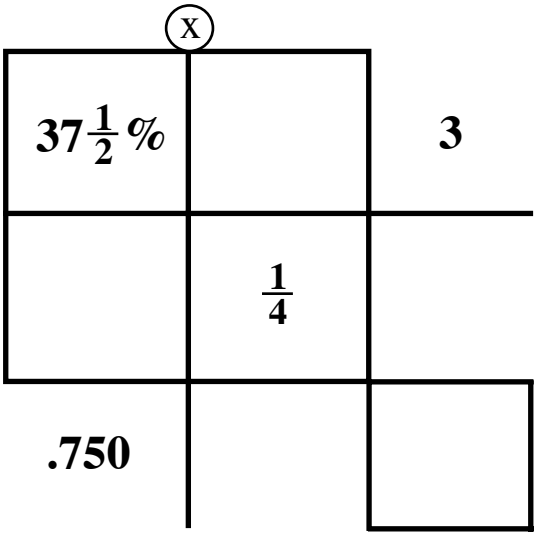
6.



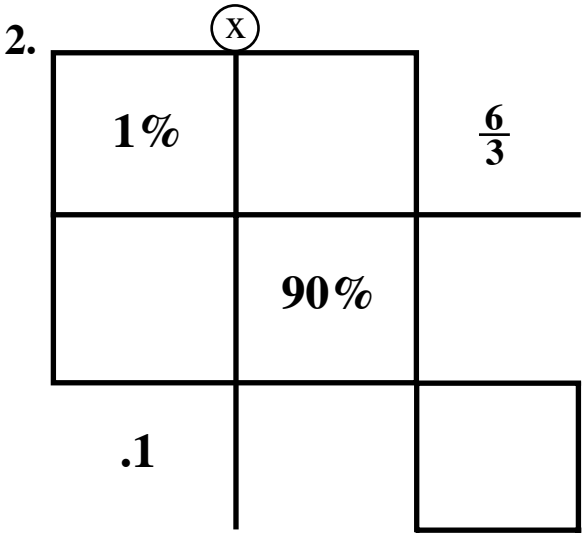
Copyright © 2002 Mathematics Learning

Fraction-Decimal-Percent Two Ways # 6

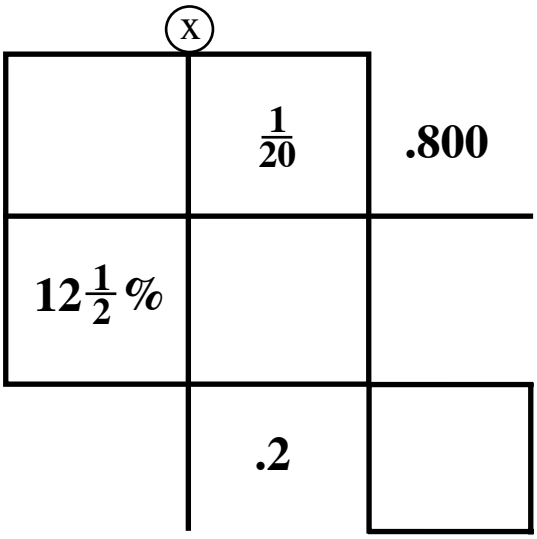
1.



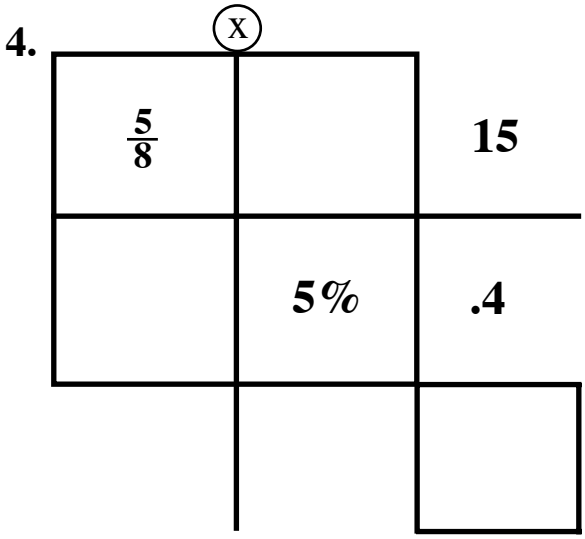
2.



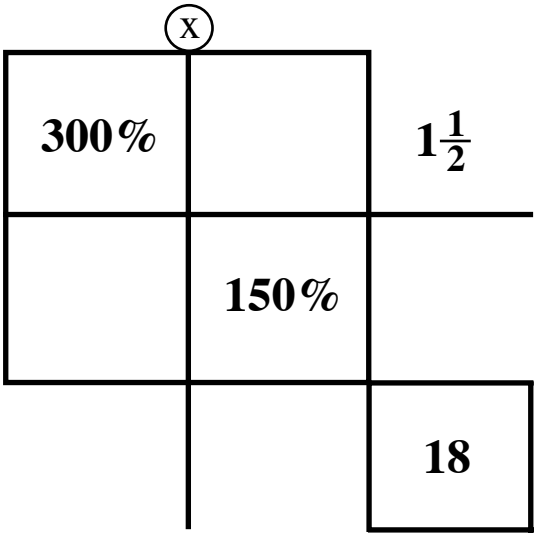
3.



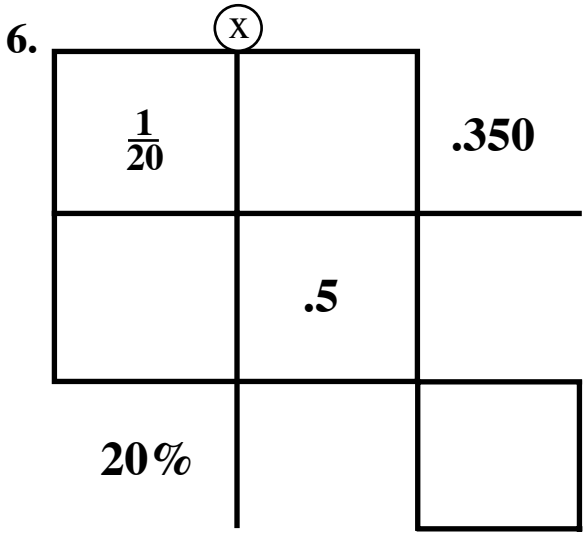
4.



5.



6.



Copyright © 2002 Mathematics Learning

Equivalency Chart

1.

	Fraction	Decimal	Percent
a.	$\frac{2}{5}$		
b.		.5	
c.			75%
d.	$\frac{1}{10}$		
e.			30%
f.		.7	
g.	$\frac{9}{10}$		
h.		.6	
i.	$\frac{1}{5}$		
j.			80%
k.		.25	
l.		.125	
m.	$\frac{1}{3}$		
n.			87.5%
o.			$66\frac{2}{3}$ %
p.	$\frac{5}{8}$		
q.		.375	

Complete each chart by writing the equivalent fraction, decimal or percent.

Express all fractions in simplest terms.

2.

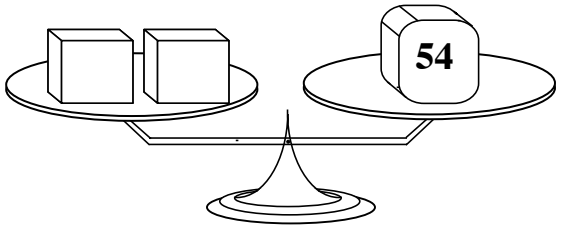
	Fraction	Decimal	Percent
a.	$\frac{3}{5}$		
b.		.20	
c.			25%
d.	$\frac{8}{10}$		
e.			45%
f.	$\frac{1}{8}$		
g.			90%
h.		1.25	
i.	$\frac{1}{50}$		
j.			150%
k.		.05	
l.		.625	
m.	$\frac{2}{3}$		
n.			300%
o.			.1%
p.	$\frac{3}{8}$		
q.		.875	

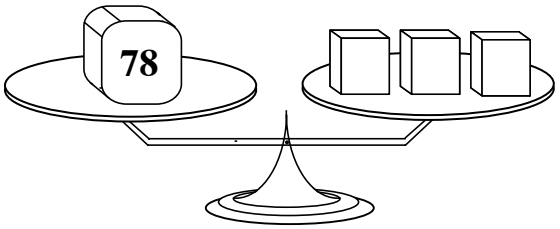
Copyright © 2002 Mathematics Learning

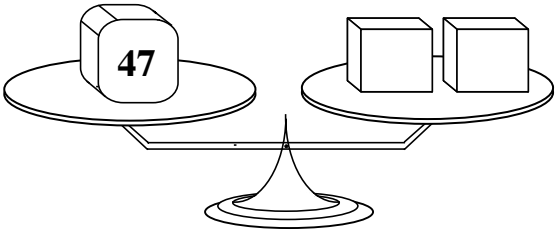
Algebra Balances # 1

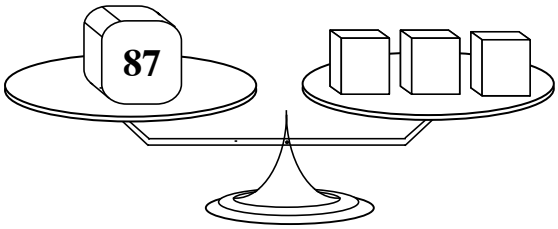
After solving the balance, write an equation for it.

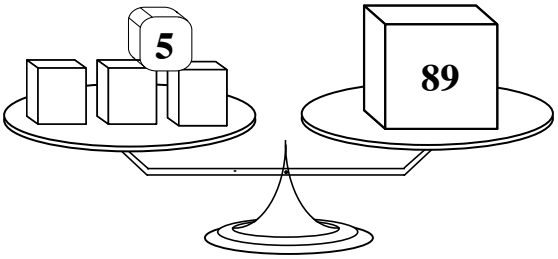
Boxes that are the same size and shape must have the same number in them.

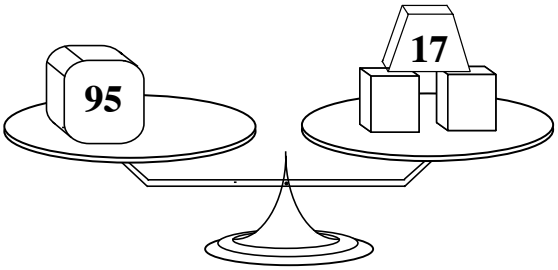
1. 

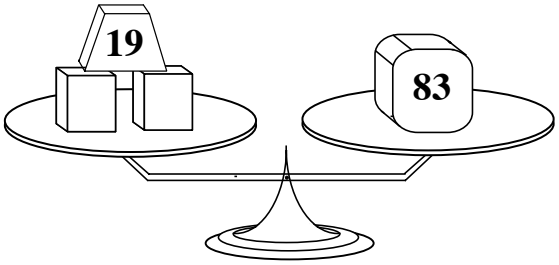
2. 

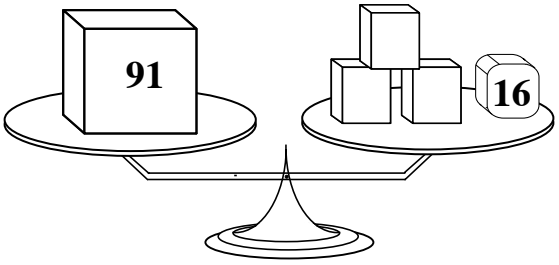
3. 

4. 

5. 

6. 

7. 

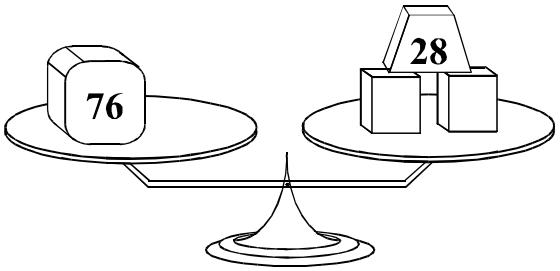
8. 

Copyright © 2002 Mathematics Learning

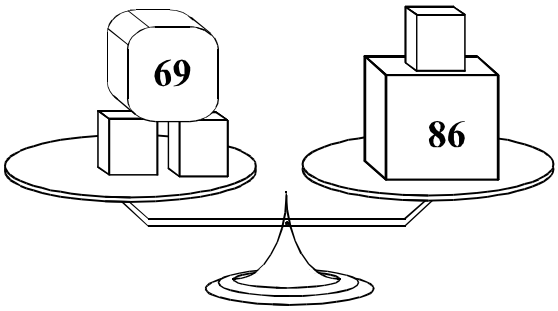
Algebra Balances # 2

After solving the balance, write an equation for it.

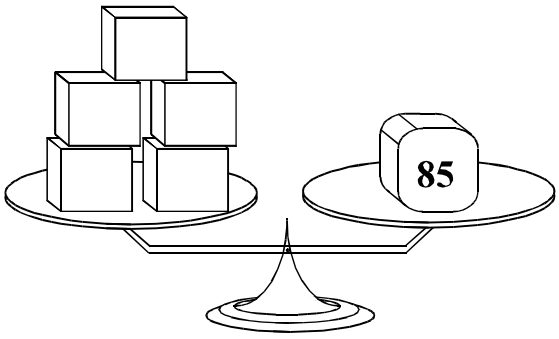
1.



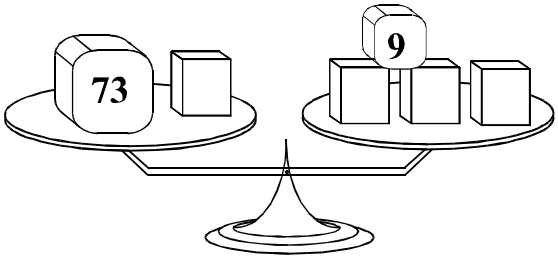
2.



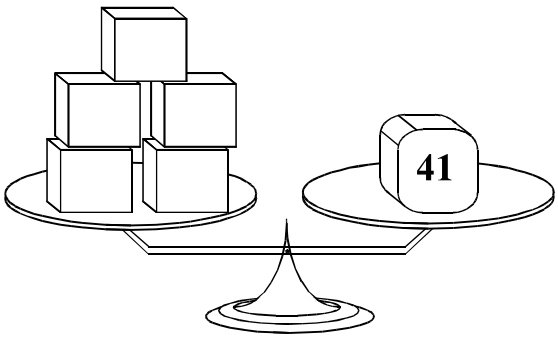
3.



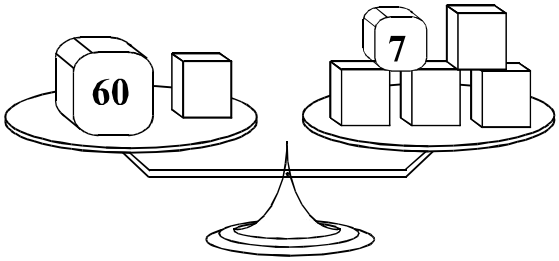
4.



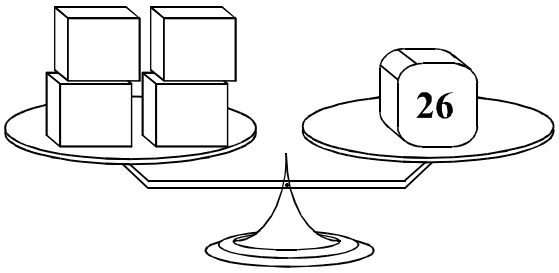
5.



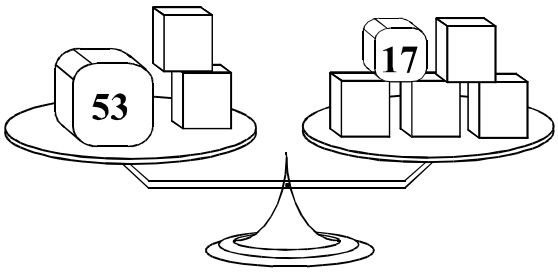
6.



7.



8.

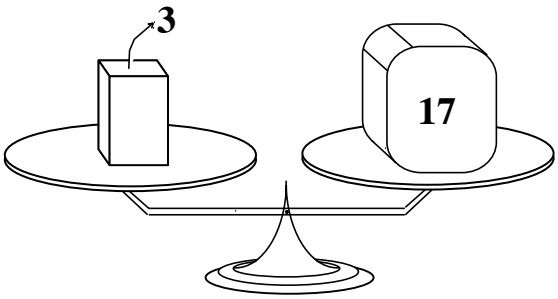


Copyright © 2002 Mathematics Learning

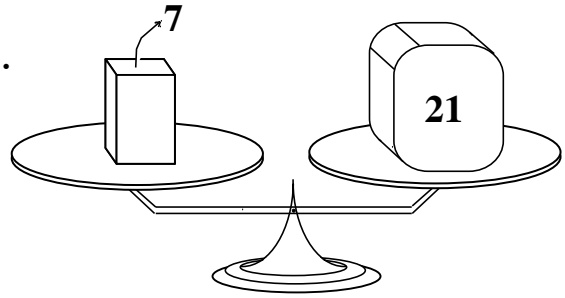
Algebra Balances # 3

After solving the balance, write an equation for it.

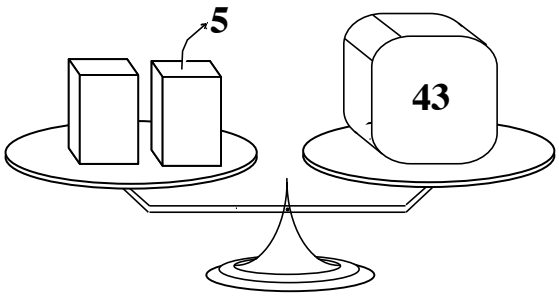
1. When three are removed from the box, the scale balances. How many does the box hold?



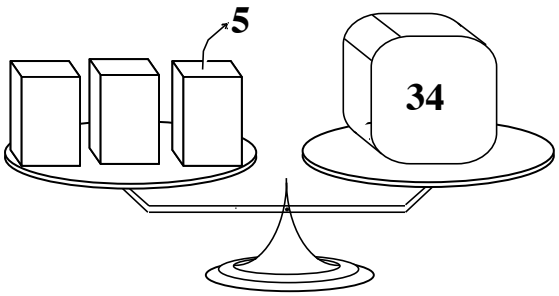
2.



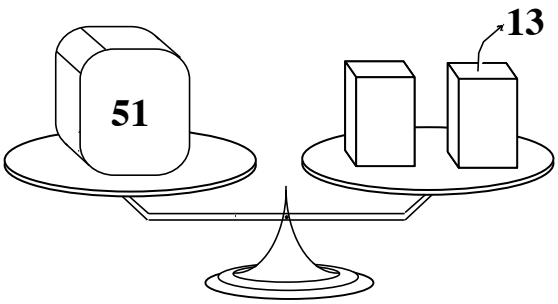
3.



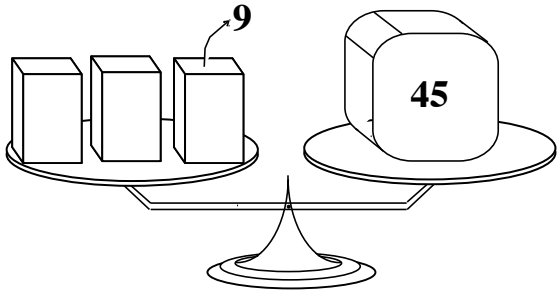
4.



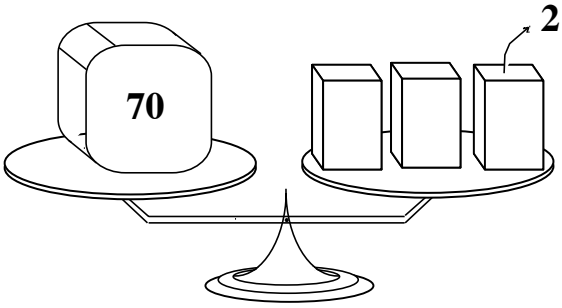
5.



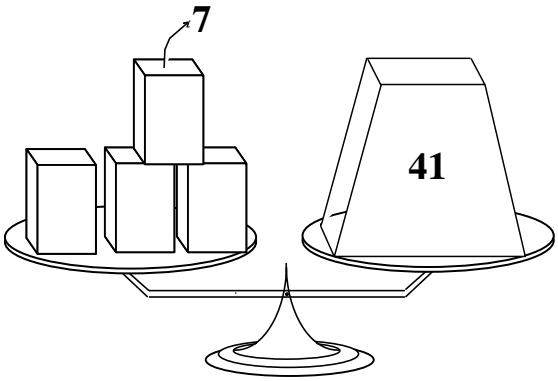
6.



7.



8.



Copyright © 2002 Mathematics Learning

Thinking Algebraically #4

1. A printer is packaging books in identical boxes. She has filled seven boxes and all but 5 books in another box. She has packed 51 books. How many books in a full box? Solve. Draw a picture for this problem. Now write an algebraic equation for the problem.

2. A printer is packaging books in identical boxes. She has filled five boxes and all but 4 books in another box. She has packed 86 books. How many books in a full box? Solve. Draw a picture for this problem. Now write an algebraic equation for the problem.

Copyright © 2002 Mathematics Learning

What's the Rule? # 2

1.

n	y
6	12
2	8
14	20
74	
	38

y = _____

2.

n	y
2	18
8	72
4	36
20	
	171

y = _____

3.

n	y
1	1
6	16
25	73
53	
	10

y = _____

4.

n	y
5	25
60	245
9	41
1	
	405

y = _____

5.

n	y
20	80
45	55
90	10
1	
	0

y = _____

6.

n	y
12	3
48	12
160	40
4	
	7

y = _____

Copyright © 2002 Mathematics Learning

What's the Rule? # 3

1.

n	y
15	6
26	17
48	39
201	
	0

y = _____

2.

n	y
27	9
3	1
15	5
90	
	7

y = _____

3.

n	y
6	59
20	199
3	29
100	
	9

y = _____

4.

n	y
6	54
10	50
12	48
15	
	0

y = _____

5.

n	y
$5\frac{1}{4}$	21
$3\frac{1}{2}$	14
1.5	6
$7\frac{1}{2}$	
	1

y = _____

6.

n	y
3	10
10	24
18	40
36	
	4

y = _____

Copyright © 2002 Mathematics Learning

What's the Rule? # 4

1.

n	y
6	36
8	64
10	100
-5	
	400

y = _____

2.

n	y
10	20
5	25
3	27
16	
	40

y = _____

3.

n	y
1	$\frac{1}{2}$
6	3
9	$4\frac{1}{2}$
0	
	$10\frac{1}{2}$

y = _____

4.

n	y
$\frac{1}{8}$	$\frac{5}{8}$
$\frac{1}{4}$	$\frac{3}{4}$
$\frac{1}{2}$	1
$1\frac{3}{4}$	
	$\frac{7}{8}$

y = _____

5.

n	y
2.408	2.41
.068	.07
.999	1.001
.78	
	2

y = _____

6.

n	y
1	1
2	6
4	16
0	
	96

y = _____

Copyright © 2002 Mathematics Learning

What's the Rule? # 5

1.

n	y
5	20
8	26
35	80
0	
	200

y = _____

2.

n	y
12	7
30	16
4	3
48	
	100

y = _____

3.

n	y
4	20
7	56
9	90
0	
	2

y = _____

4.

n	y
10	1
20	2
90	9
1	
	.400

y = _____

5.

n	y
$1\frac{2}{3}$	5
$6\frac{1}{3}$	19
$\frac{1}{6}$	$\frac{1}{2}$
$2\frac{1}{4}$	
	$\frac{3}{8}$

y = _____

6.

n	y
10	30
8	32
4	36
50	
	0

y = _____

Copyright © 2002 Mathematics Learning

What's the Rule? # 6

1.

n	y
6	30
-2	-10
25	125
-7	
	-100

y = _____

2.

n	y
0	0
2	-2
-4	4
-2	
	-4

y = _____

3.

n	y
5	24
9	80
7	48
1	
	99

y = _____

4.

n	y
$\frac{1}{2}$	$\frac{1}{4}$
$5\frac{3}{8}$	$5\frac{1}{8}$
$2\frac{1}{8}$	$1\frac{7}{8}$
$1\frac{1}{3}$	
	$\frac{1}{6}$

y = _____

5.

n	y
8	72
10	70
20	60
40	
	0

y = _____

6.

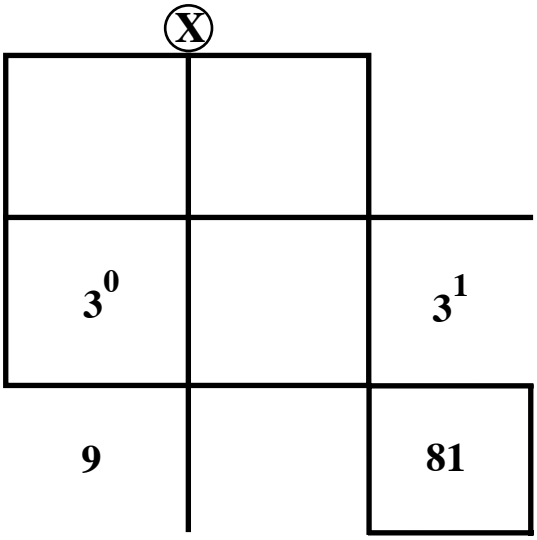
n	y
1	$\frac{3}{4}$
4	3
8	6
40	
	60

y = _____

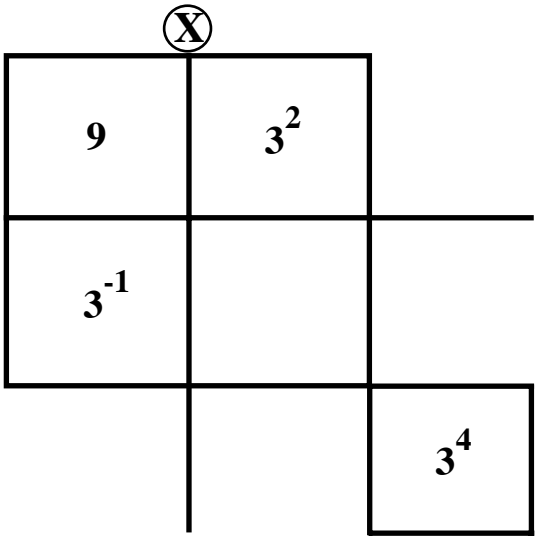
Copyright © 2002 Mathematics Learning

Algebra Two Ways #2

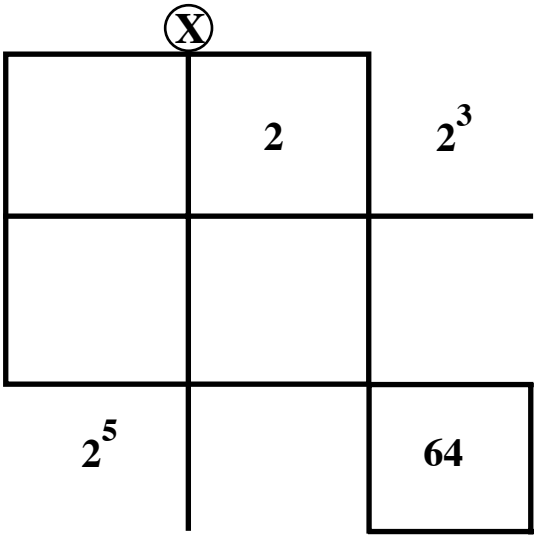
1.



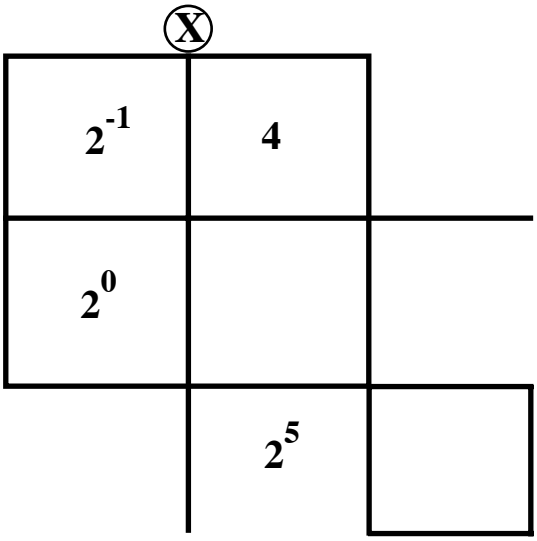
2.



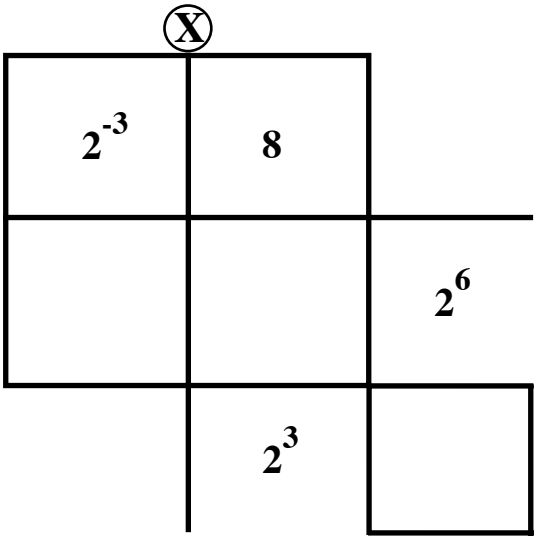
3.



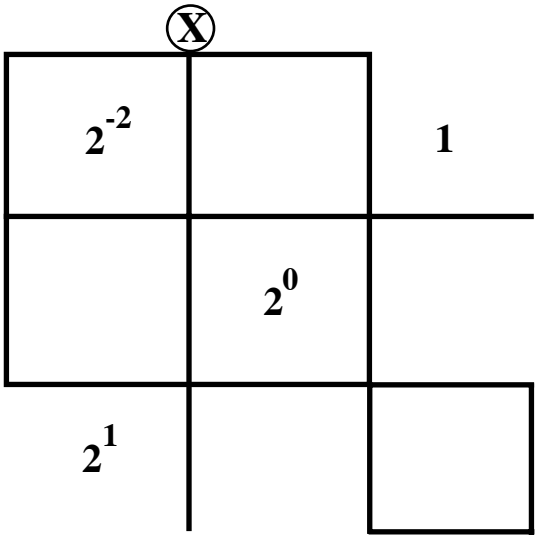
4.



5.



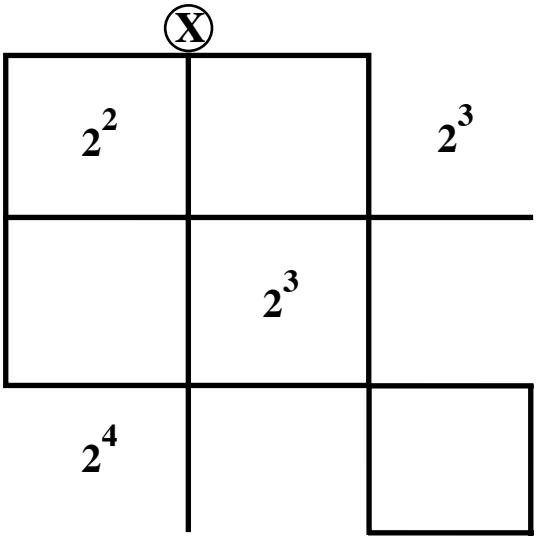
6.



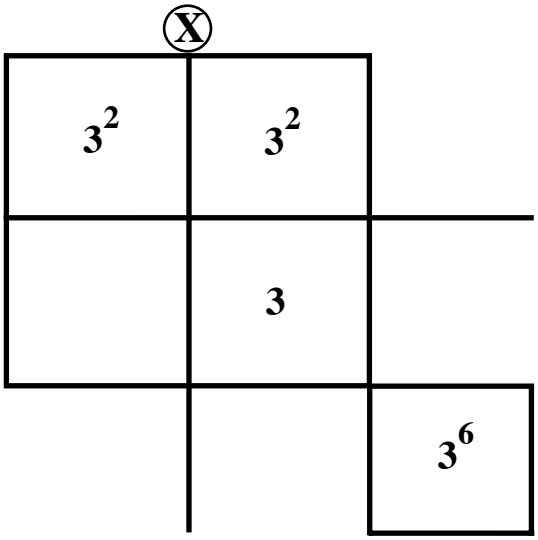
Copyright © 2002 Mathematics Learning

Algebra Two Ways #3

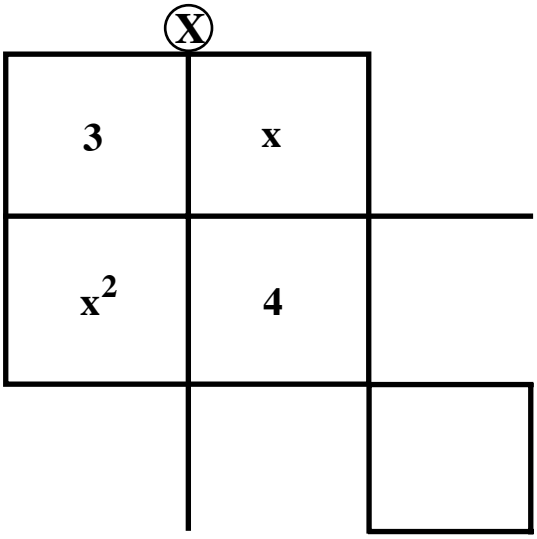
1.



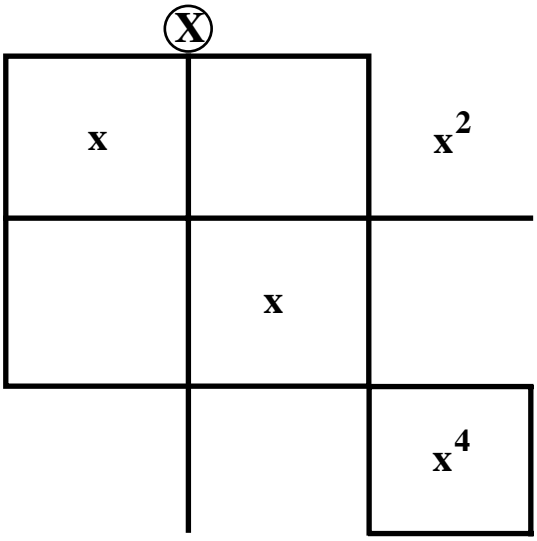
2.



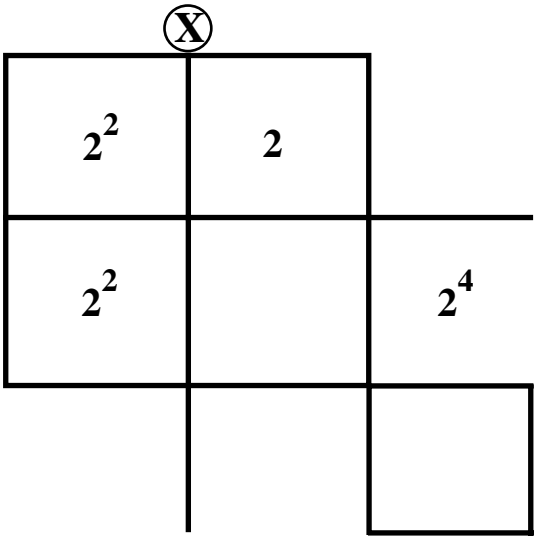
3.



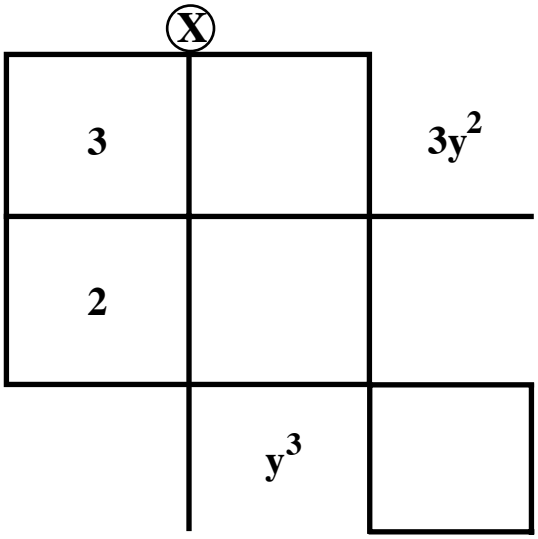
4.



5.



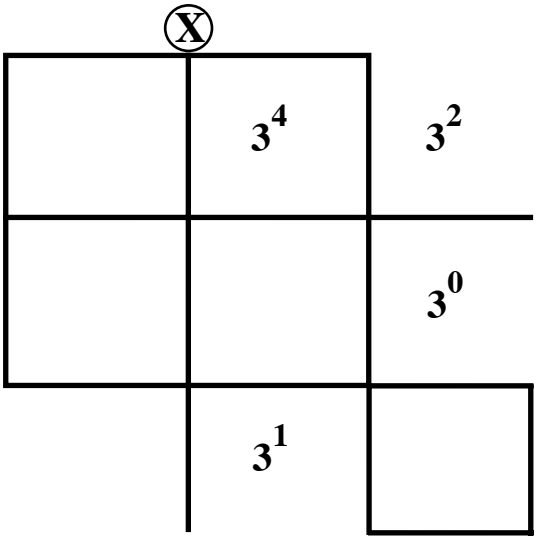
6.



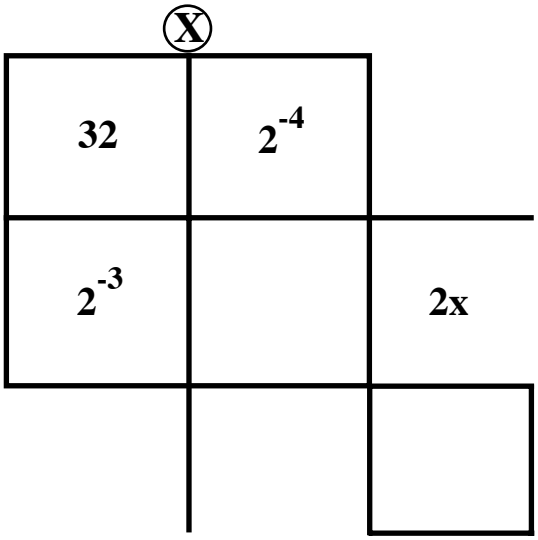
Copyright © 2002 Mathematics Learning

Algebra Two Ways #4

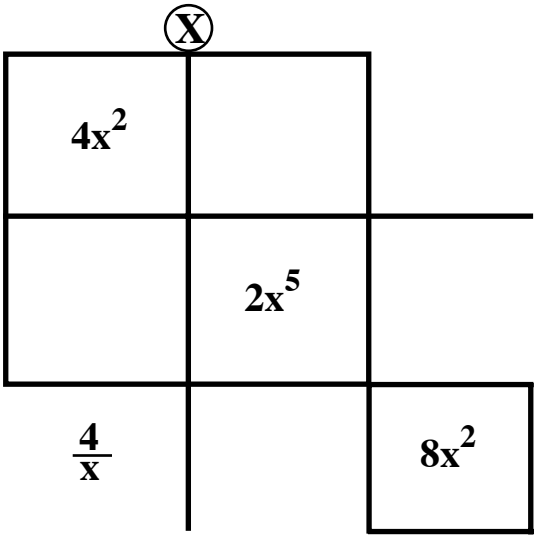
1.



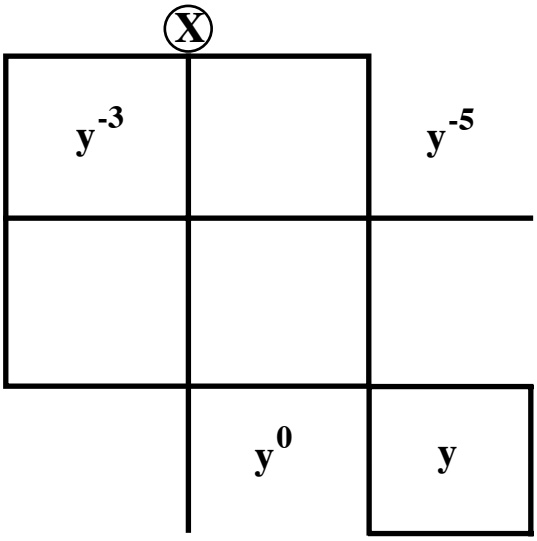
2.



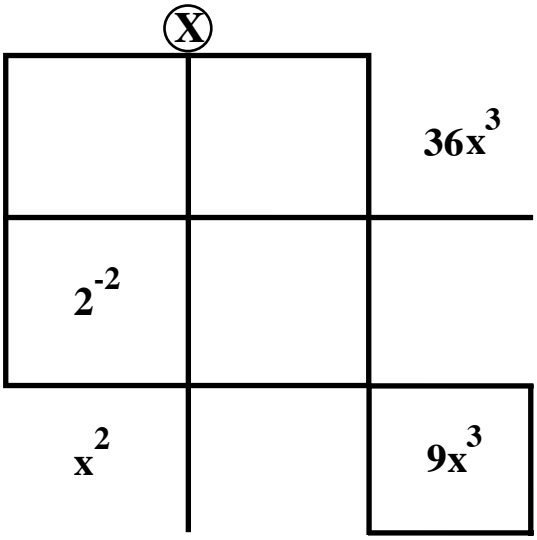
3.



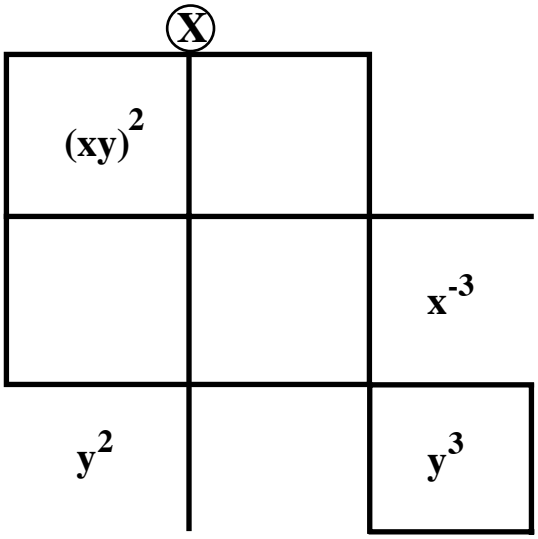
4.



5.



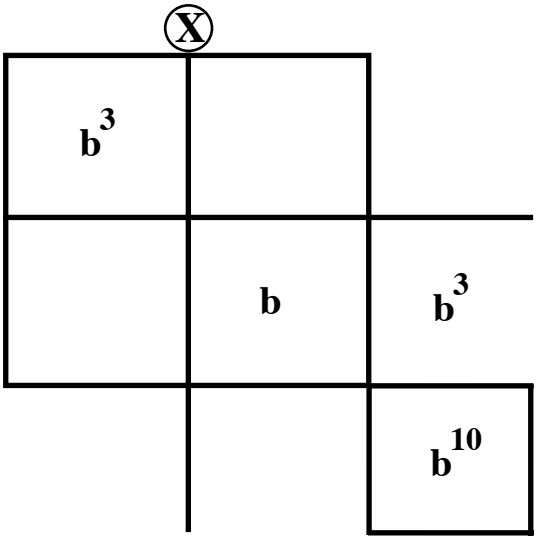
6.



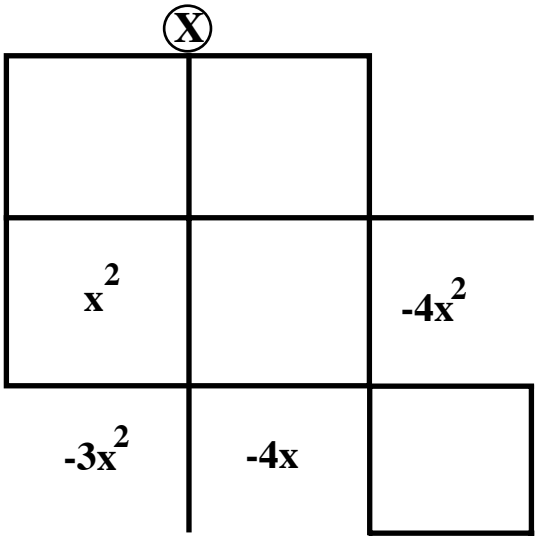
Copyright © 2002 Mathematics Learning

Algebra Two Ways #5

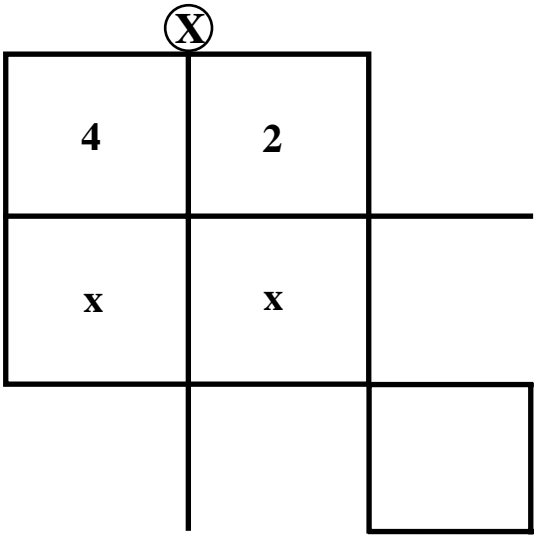
1.



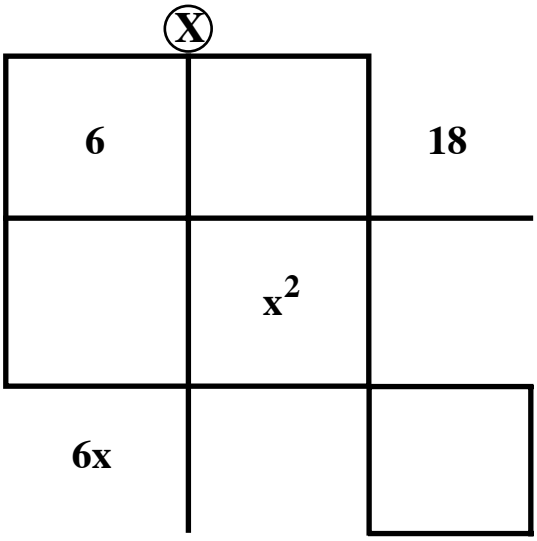
2.



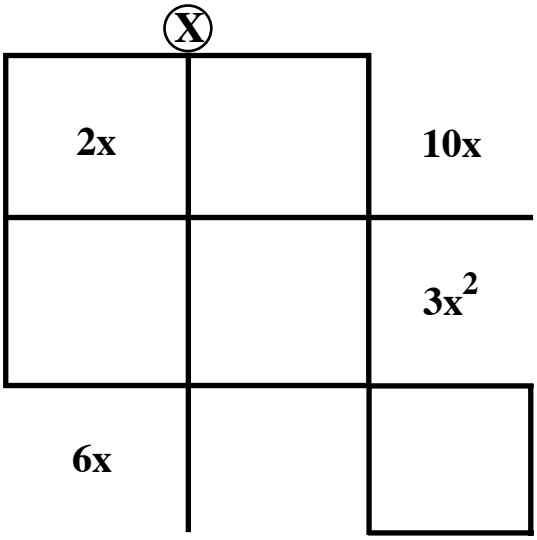
3.



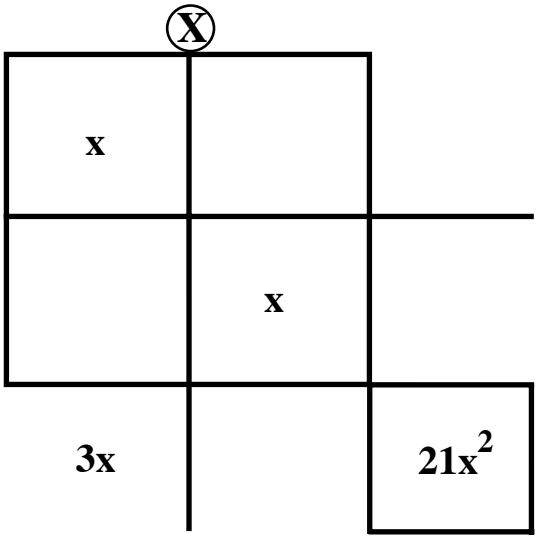
4.



5.



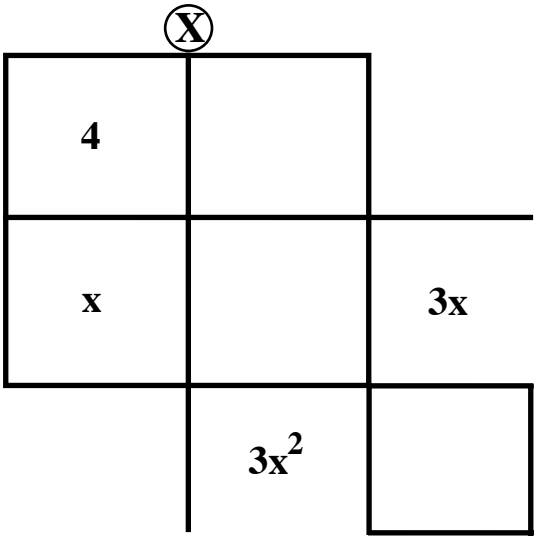
6.



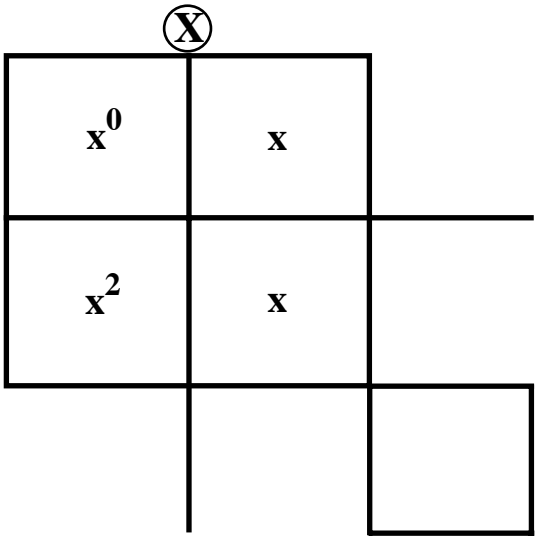
Copyright © 2002 Mathematics Learning

Algebra Two Ways #6

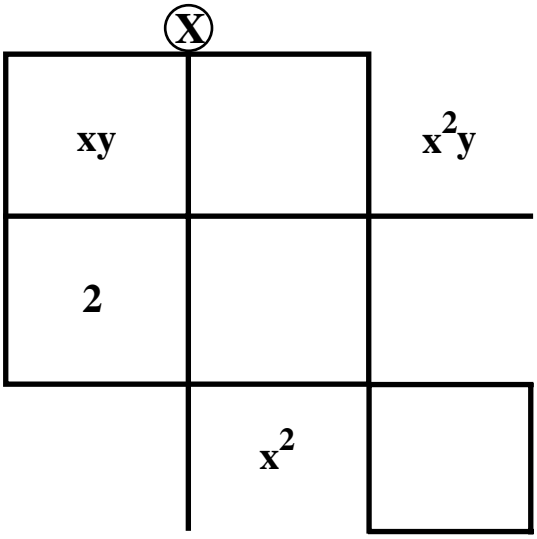
1.



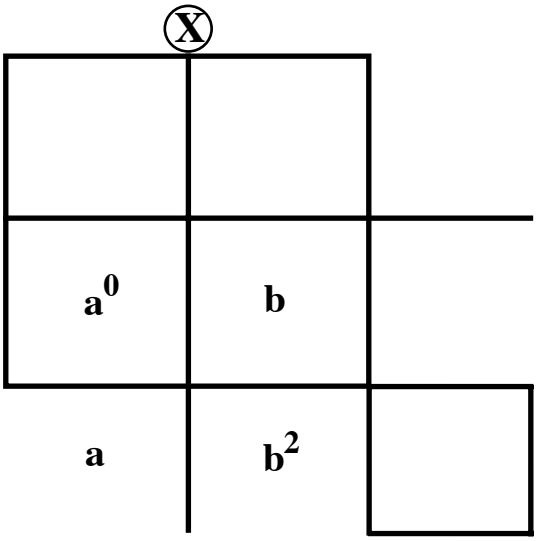
2.



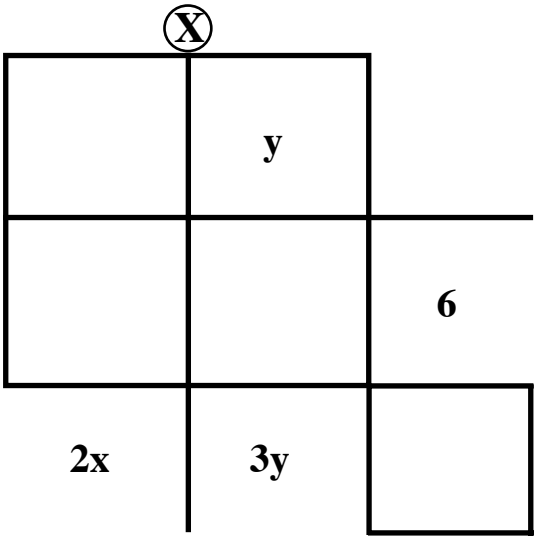
3.



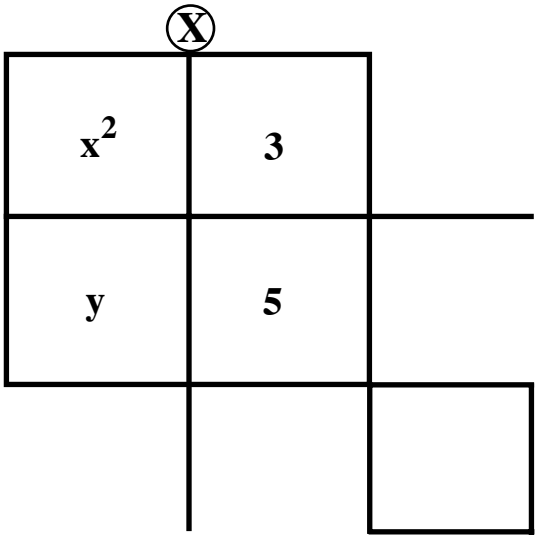
4.



5.

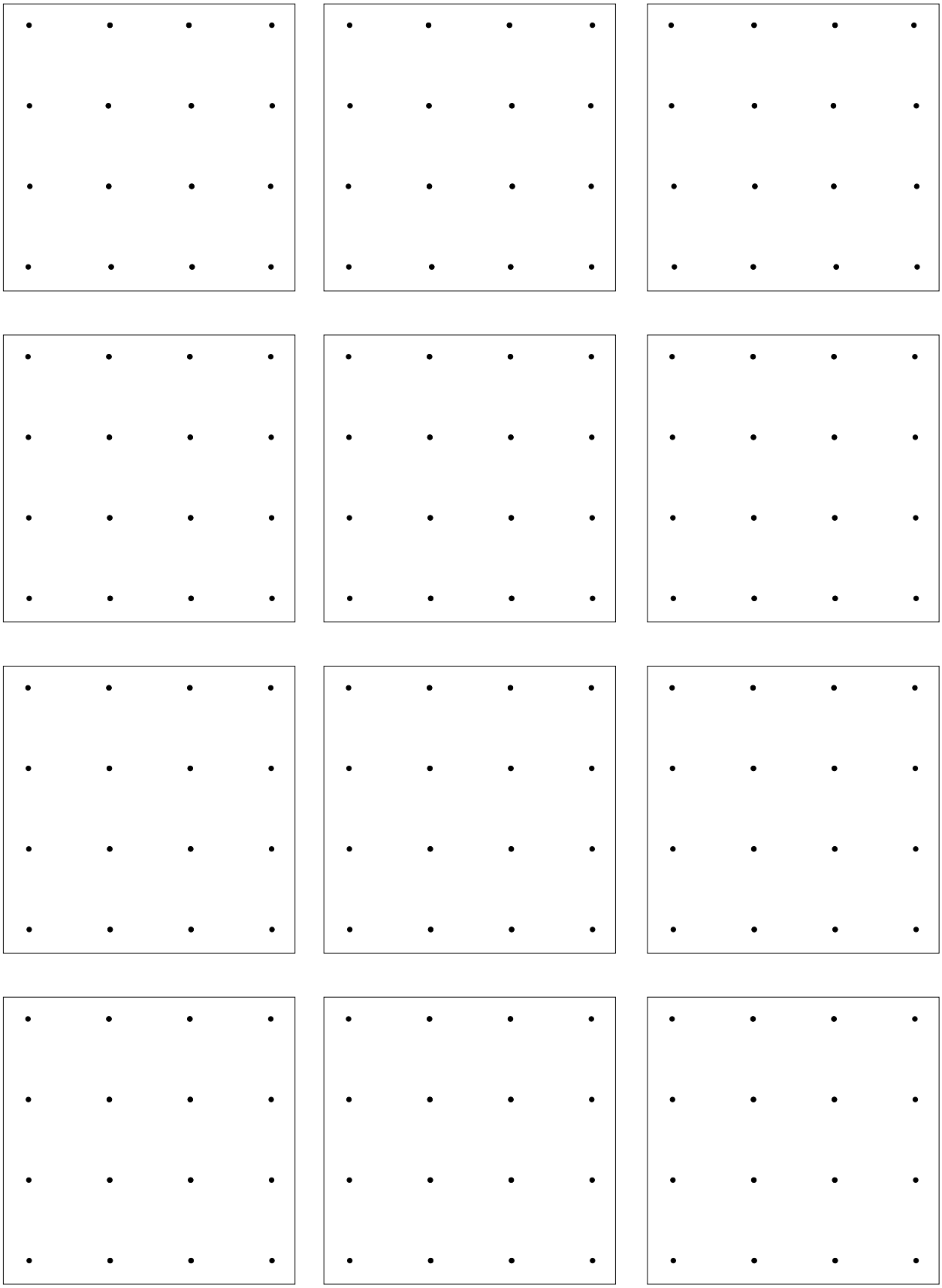


6.



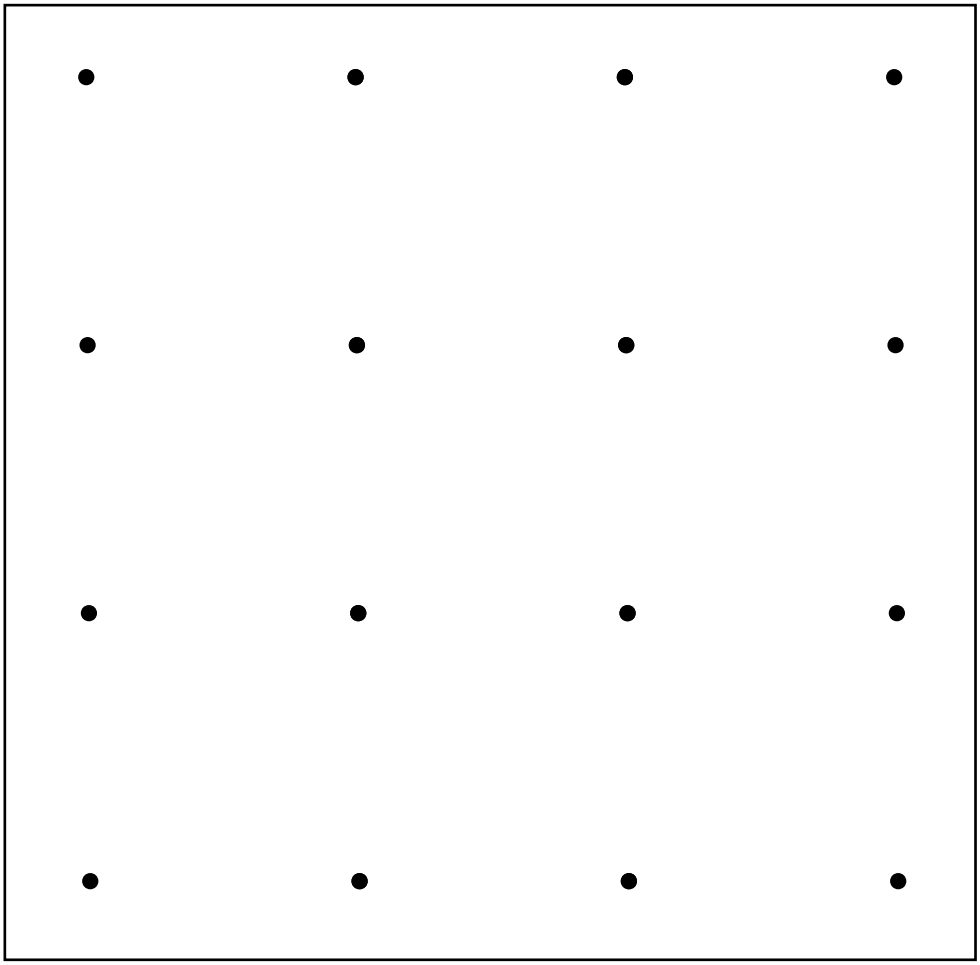
Copyright © 2002 Mathematics Learning

16 Point Grids



Copyright © 2002 Mathematics Learning

TRIANGLE #_____



1. The area of the above triangle is _____ square units.

2. Angle 1 ≈ _____ ^{o}

3. Angle 2 ≈ _____ ^{o}

4. Angle 3 ≈ _____ ^{o}

5. The sum of the three angles is _____ ^{o}.

6. Using your angle measures, classify the triangle as either a:
Right Triangle_____
Acute Triangle_____
Obtuse Triangle____

7. Side 1 ≈ _____ units long.

8. Side 2 ≈ _____ units long.

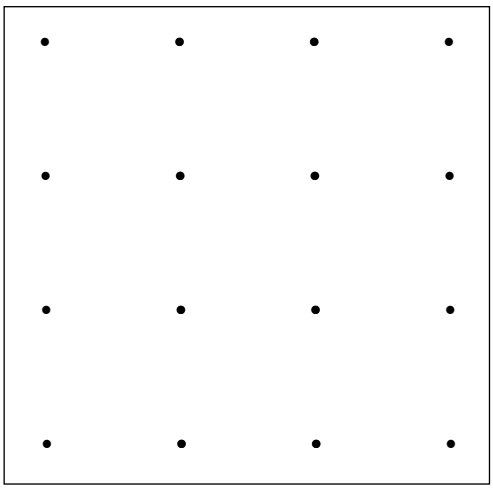
9. Side 3 ≈ _____ units long.

10. The perimeter of this triangle is _____ units.

11. Using your measurements, classify the triangle as either a:
Scalene Triangle_____
Isosceles Triangle_____
Equilateral Triangle_____

Copyright © 2002 Mathematics Learning

Quadrilateral #_____

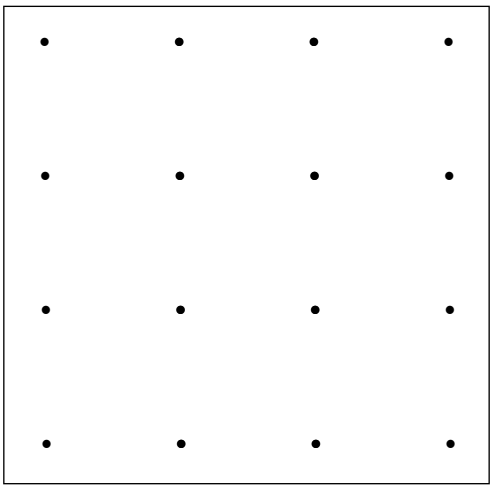


1. The area of the quadrilateral is _____ square units.

2. Classify the quadrilateral. Check all that apply.

Square _____
Rectangle_____
Parallelogram _____
Trapezoid _____
Rhombus _____
None of the above _____

Quadrilateral #_____

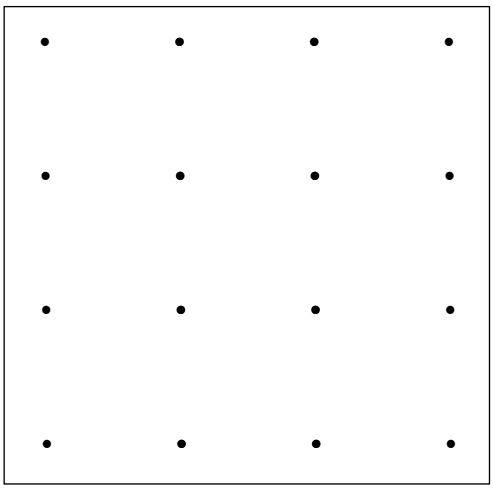


1. The area of the quadrilateral is _____ square units.

2. Classify the quadrilateral. Check all that apply.

Square _____
Rectangle_____
Parallelogram _____
Trapezoid _____
Rhombus _____
None of the above _____

Quadrilateral #_____



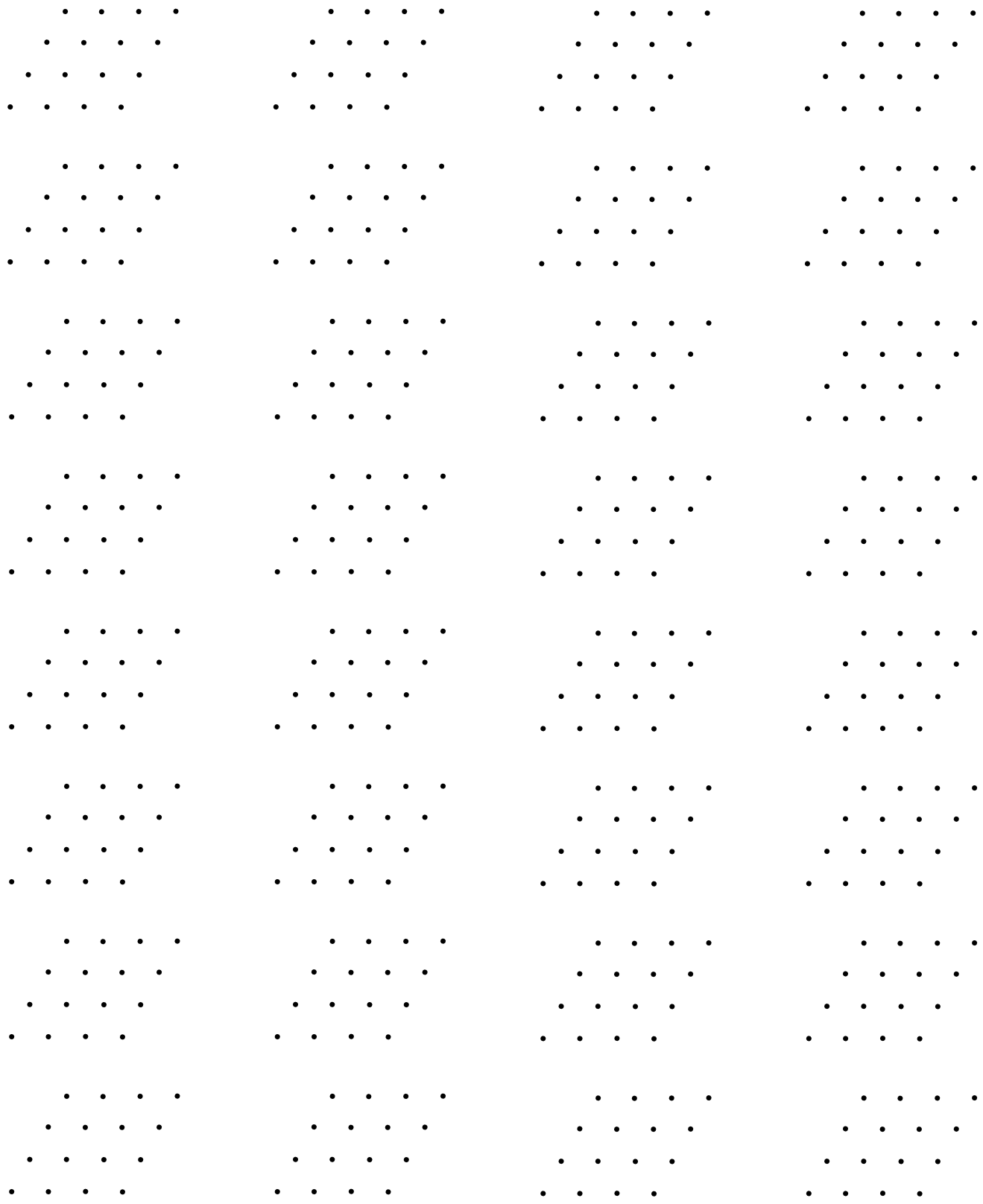
1. The area of the quadrilateral is _____ square units.

2. Classify the quadrilateral. Check all that apply.

Square _____
Rectangle_____
Parallelogram _____
Trapezoid _____
Rhombus _____
None of the above _____

Copyright © 2002 Mathematics Learning

A Different 16 Point Grid



Copyright © 2002 Mathematics Learning