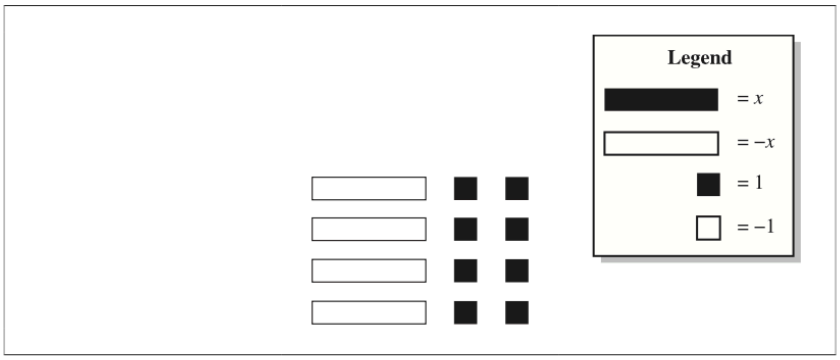
Pattern and Relation 7

Name:_____

Use the following algebra-tile diagram to answer question 9.



9. The algebra tile model above could represent the product of

A. 2 and $(2x + 4)$
B. 2 and $(2x - 4)$
C. 4 and $(-x - 2)$
D. 4 and $(-x + 2)$

Use the following information to answer question 3.

Two students, Robert and Jacob, simplify the expression $3(x^2 + 4x - 1) - (2x + 5)$, as shown below.

	Robert	**Jacob**
Step 1	$= 3x^2 + 12x - 3 - (2x + 5)$	$= 3x^2 + 12x - 1 - (2x + 5)$
Step 2	$= 3x^2 + 12x - 3 - 2x + 5$	$= 3x^2 + 12x - 1 - 2x - 5$
Step 3	$= 3x^2 + 10x + 2$	$= 3x^2 + 10x - 6$

3. The **first** error made in the simplification of the expression shown above was made by

A. Robert in Step 1
B. Jacob in Step 1
C. Robert in Step 2
D. Jacob in Step 2

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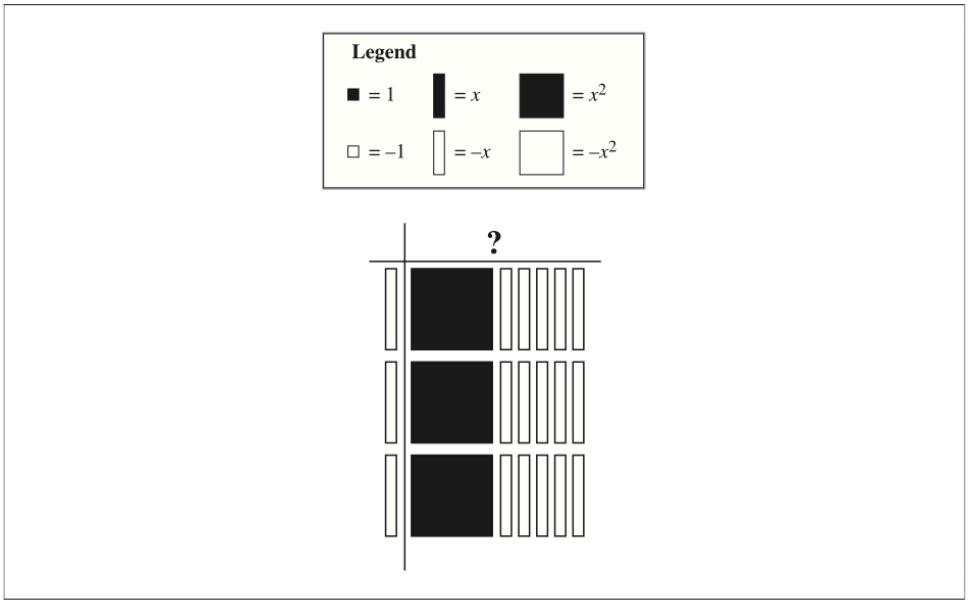
Use the following information to answer question 39.



39. Which of the following polynomials represents the unknown expression in the model shown above?

A. $x^2 - 5x$
B. $-x^2 + 5x$
C. $x - 5$
D. $-x + 5$

Numerical Response

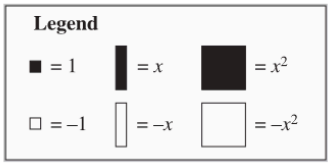
9. The quotient of $(-12x^2 - 9x) \div ■x$ is $-4x - 3$. What is the value of ■?

Answer: _____

(Record your answer in the numerical-response section on the answer sheet.)

Pattern and Relation 7

Name:_____



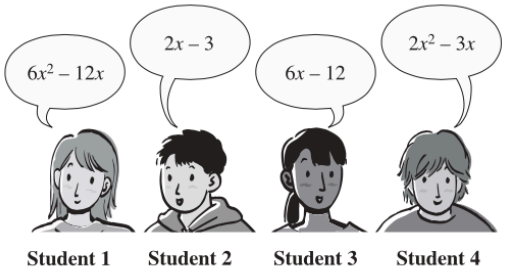
The diagram below shows an incomplete model of the multiplication of two polynomials.

24. What is the coefficient on the x-term in the product?

A. −12
B. 12
C. −6
D. 6

Use the following information to answer question 16.

Four students simplified the expression $\frac{3x(4x-6)}{2(3x)}$. Their answers are shown below.



16. Which student correctly simplified the expression?

A. Student 1
B. Student 2
C. Student 3
D. Student 4

Pattern and Relation 7

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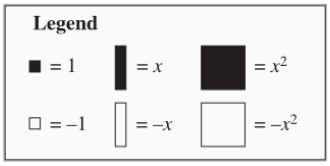
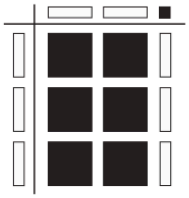
Use the following information to answer question 19.

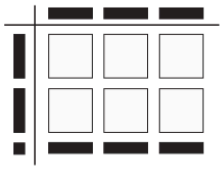


19. Which of the following models could be used to represent the division of $6x^2 - 3x$ by $-3x$?

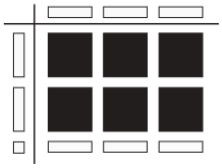
A.



B.



C.



D.