4. Which of the following expressions is equivalent to $\dfrac{(40 + 10)}{(5 \times (6 - 4))}$?   *Put brackets on top and bottom*

   A. $40 + 10 \div 5 \times 6 - 4$
   B. $(40 + 10) \div 5 \times (6 - 4)$
   C. $40 + 10 \div (5 \times (6 - 4))$
   D. $(40 + 10) \div (5 \times (6 - 4))$ *(circled)*

Use the following diagram to answer question 15.

A ladder with equally spaced rungs is shown below.

rungs

$\dfrac{206 - (10 \times 8)}{7}$ *spaces*

* d represents distance between rungs
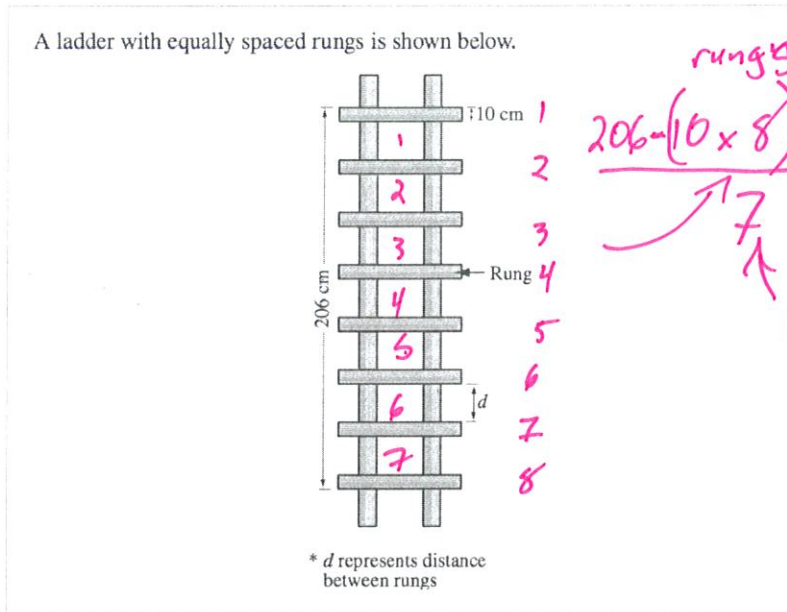
15. Which of the following equations can be used to calculate the distance, d, between each ladder rung?

   A. $d = 206 - 8(10) \div 7$

   B. $d = 206 - 8(10) \times 7$

   C. $d = \dfrac{7}{206 - 8(10)}$

   D. $d = \dfrac{206 - 8(10)}{7}$ *(circled)*

32. Jenny notices that a music store is having a "No GST and 40% off the regular price" sale. If the regular price of a CD is $15.99, then what is the maximum number of sale-priced CDs that Jenny can buy with her $80 gift card?

   A. 8 *(circled)*
   B. 9
   C. 11
   D. 13

Handwritten:
$80 = 0.6(15.99)$ ✗
$\dfrac{80}{9.594} = \dfrac{9.594x}{9.594}$
$x = 8.33$ $x = 8$ ✓

Use the following information to answer question 39.

Jennifer wants to buy a computer that costs $2 000, including all taxes. She will make a down payment of $500 and arrange to make 5 equal payments for the balance owing.

what's left owing

39. Which of the following expressions can Jennifer use to determine the amount of each of the 5 equal payments?

$$\frac{(2000-500)}{5}$$

   A. ($2 000 – 500) ÷ 5
   B. ($2 000 – 500) × 5
   C. ($2 000 × 5) – 500
   D. ($2 000 ÷ 5) – 500

Use the following information to answer question 27.

Connie buys a horse for $750 (including GST). She considers the two payment plans shown below.

Plan 1	Pay $150 now and $25 each month
Plan 2	Pay $200 now and $55 each month

$$\frac{750-200=55}{x}$$

$$\frac{750-150=25}{x}$$

$$\frac{600}{25}=x=24$$

$$\frac{550}{55}=x=10$$

payments

payments

27. How many **fewer** monthly payments could Connie make if she selects Plan 2?

   A. 10
   B. 14
   C. 20
   D. 24

Use the following information to answer question 28.

The simplifications of two different expressions are shown below.

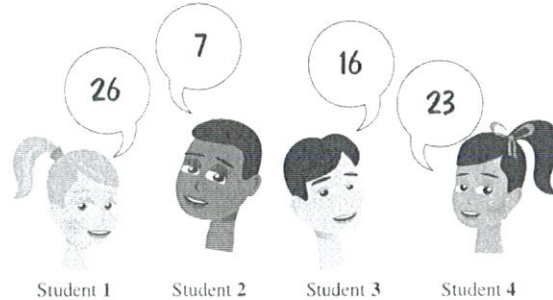| **Expression X**	**Expression Y**
$(3^2)^3 - 4^4 + 4^2 \times (-5)^2$	$2^6 \div 2^2 + (-5^2) \times 3$
$= 3^6 - 4^4 + 4^2 \times (-5)^2$	$= 2^3 + (-5^2) \times 3$
$= 729 - 256 + 16 \times 25$	$= 8 + (-25) \times 3$
$= 729 - 256 + 400$	$= 8 + (-75)$
$= 873$	$= -67$

2^4

28. Which of the following statements about the simplifications above is true?

   A. The simplifications of both expressions are correct.
   B. The simplifications of both expressions are incorrect.
   C. The simplification of Expression X is correct and the simplification of Expression Y is incorrect.
   D. The simplification of Expression Y is correct and the simplification of Expression X is incorrect.

Use the following information to answer question 35.

Each of the four students shown below simplifies the following expression.

$$4 + 3 \times 5 - 6^4 \div (4 + 2)^3 \times 2$$

26   7   16   23

Student 1   Student 2   Student 3   Student 4

(handwritten work:)
$4 + 3 \times 5 - 6^4 \div (4+2)^3 \times 2$
$4 + 15 - 1296 \div (6)^3 \times 2$
$4 + 15 - 1296 \div 216 \times 2$
$19 - 6 \times 2$
$19 - 12$
7

35. Which student correctly simplified the expression?

- A. Student 1
- **B.** Student 2 *(circled)*
- C. Student 3
- D. Student 4

Use the following information to answer question 17.

The letters P and Q each represent an integer in the expression below. *(handwritten: want a "-")*

$$2 \times P^3 - 6 \div Q$$

(handwritten: ↑ want this to be positive)

17. Which of the following values for P and Q would result in the lowest value for the expression shown above?

Row	P	Q
A.	-2	-2
B.	2	-2
C.	-2	2
D.	2	2

(C is circled)

35. What is the value of the expression $6 - \frac{1}{4} \div \frac{1}{2} - 2^3 \times 0.75$?

- **A.** $-\frac{1}{2}$ *(circled)*
- B. $-\frac{1}{8}$
- C. $\frac{1}{8}$
- D. $\frac{1}{2}$

(handwritten work:)
$6 - \frac{1}{4} \cdot \frac{2}{1} - 8 \cdot \frac{3}{4}$
$6 - \frac{1}{2} - 2 \cdot 3$
$6 - \frac{1}{2} - 6$