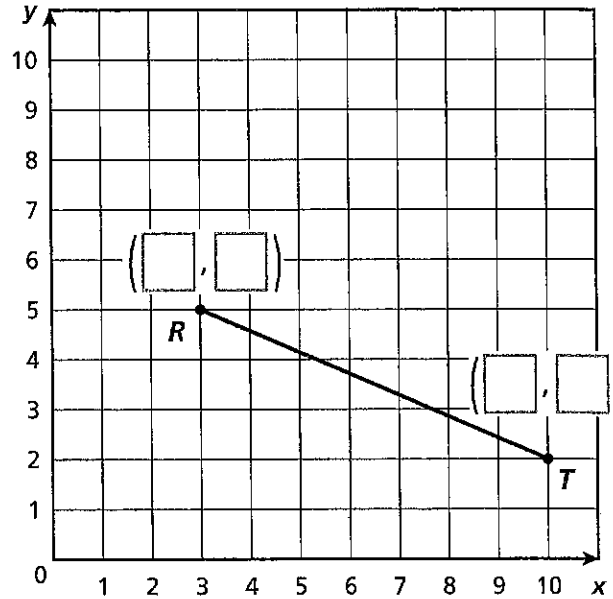


- 1 Use the numbers to complete the ordered pairs that represent the endpoints of line segment  $RT$ .

2      3

5      8

9      10



- 2 Place parentheses in the expression so it simplifies to 30.  $5 \cdot 7 - 3 + 2$

- 3 Write  $12.9 + 8$  using words.

- 4 Write  $8 \div (7 - 5)$  using words.

- 5 Select the expression that represents adding 2 to the quotient of 12 divided by  $y$ . Mark all that apply.

(A)  $(12 \div y) + 2$

(D)  $12y + 2$

(B)  $(2 + 12) \div y$

(E)  $2 + 12y$

(C)  $2 + (12 \div y)$

(F)  $12 \div y + 2$

- 6 Use the Order of Operations to simplify the expression.

6a.  $15 + 6 \div 3$

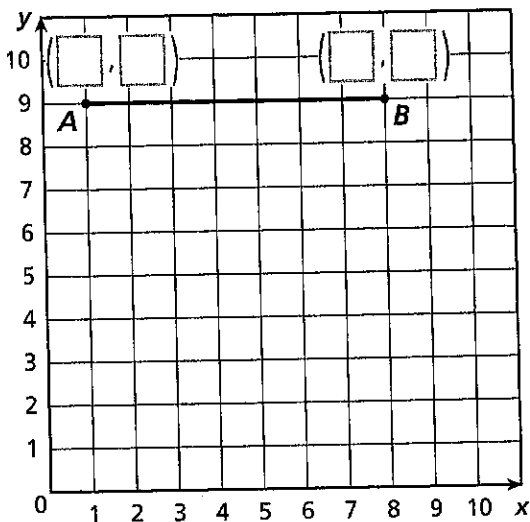
6b.  $2 + 5 \cdot 8$

6c.  $20 \div (4 + 6)$

7 The graph shows the line segment  $AB$ .

**Part A**

Write the ordered pairs that represent the endpoints of line segment  $AB$ .



**Part B**

Explain how subtraction can be used to find the length of line segment  $AB$ .

8 For Exercises 8a–8e, select True or False to indicate whether the expression represents multiplying the sum of 8 and 2 by 6.

- |                       |                            |                             |
|-----------------------|----------------------------|-----------------------------|
| 8a. $8 + 2 \cdot 6$   | <input type="radio"/> True | <input type="radio"/> False |
| 8b. $(8 + 2) \cdot 6$ | <input type="radio"/> True | <input type="radio"/> False |
| 8c. $8 + (2 \cdot 6)$ | <input type="radio"/> True | <input type="radio"/> False |
| 8d. $6 \cdot (8 + 2)$ | <input type="radio"/> True | <input type="radio"/> False |
| 8e. $6 \cdot 8 + 2$   | <input type="radio"/> True | <input type="radio"/> False |

- 9 Write a letter in each box that shows the expressions in order from least to greatest.

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
$48 \div (4 - 2) + 60 \div 2$	$42 \div 7 - 3 \cdot 2$	$9 + (18 - 3) \div 0.3$	$(1.4 + 0.6) \cdot (2 - 0.4)$





least

greatest

- 10 Select one expression and one value for the variable that makes the sentence true.

Zeke got 38 when he correctly evaluated the expression \_\_\_\_?\_\_\_\_ for \_\_\_\_?\_\_\_\_.

Expression	Value of Variable
<input type="radio"/> $n \div 2 + 20$	<input type="radio"/> $n = 2$
<input type="radio"/> $8 + n \cdot 3$	<input type="radio"/> $n = 5$
<input type="radio"/> $(16 - n) \cdot 4$	<input type="radio"/> $n = 10$
<input type="radio"/> $40 - (60 \div n)$	<input type="radio"/> $n = 12$

- 11 The table shows rules for two numerical patterns.

**Part A**

Complete the table by writing the next four terms in each pattern.

<b>Add 5</b>	5				
<b>Add 20</b>	20				

**Part B**

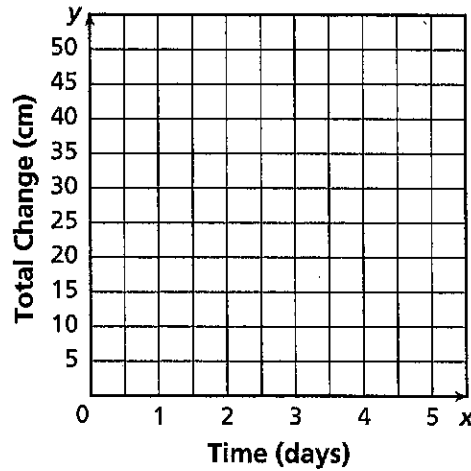
Describe a relationship between the corresponding pairs in the two patterns.

- 12 The lake's water level rises 10 centimeters each day. The table shows the total change in water level for 0, 1, 2, and 3 days.

<b>Time (days)</b>	0	1	2	3
<b>Total Change (cm)</b>	0	10	20	30

**Part A**

Graph the data in the table.



**Part B**

What total change in water level would you expect after 5 days?  
Explain your reasoning.

- 13 For Exercises 13a–13f, choose Yes or No to indicate whether the first step in simplifying the expression is addition.

13a.  $6 + 3 - 2 + 1$   Yes  No

13b.  $8.5 + 3 \cdot 4 - 2$   Yes  No

13c.  $45 \div (5 - 3) + 6$   Yes  No

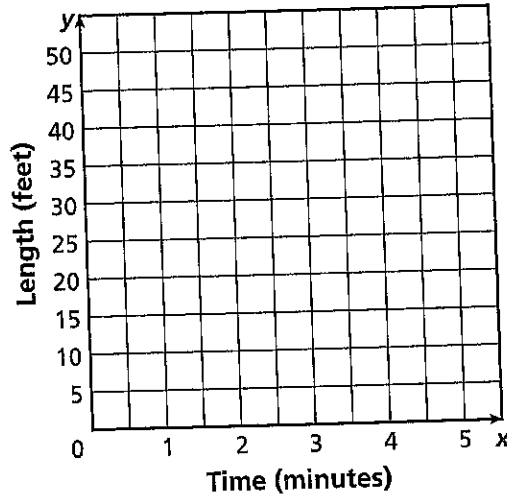
13d.  $40 \div 4 \cdot (2 + 8)$   Yes  No

13e.  $45 + 4 - 2 \div 2$   Yes  No

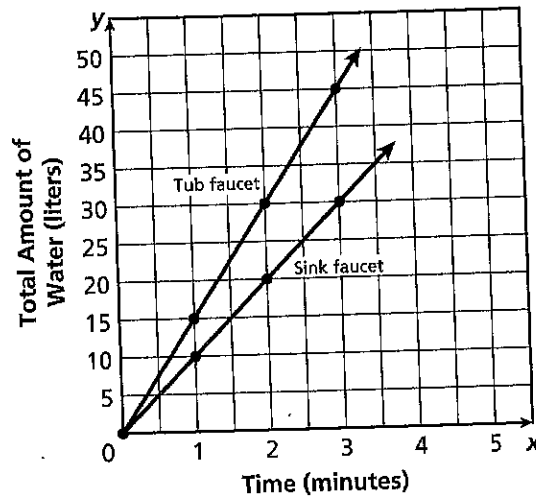
13f.  $[25.6 - (4.5 + 2)] \cdot 1.4$   Yes  No

- 14 Stephen is flying his kite. He lets out 15 feet of string each minute. Complete the table to show how much string he lets out for 1, 2, and 3 minutes. Then graph the data.

Time (minutes)	0			
Length (feet)	0			



- 15 Tami measures the total amount of water, in liters, that flows out of her sink and tub faucets each minute they are running. Describe two different relationships that the graph displays.



- 16 Draw a line to match the computation in words to the correct expression.

Multiply the sum of 3 and 5 by 2. ●

●  $3 \cdot (5 + 2)$

Add the product of 2 and 3 to 5. ●

●  $(5 \cdot 2) + 3$

Multiply 3 by the sum of 5 and 2. ●

●  $(3 + 5) \cdot 2$

Add 3 to the product of 5 and 2. ●

●  $5 + (2 \cdot 3)$

- 17 Describe how to locate the ordered pair (6, 8) on a coordinate plane. Begin your description at the origin.

- 18 Evaluate each expression for  $n = 8$ . Then classify the result as equal to 5, 10, or 20. Write the letter of the expression in the correct box.

A  $48 \div n + 4$

B  $4 \cdot (n - 3)$

C  $(n \div 2) + 1$

D  $3 \cdot n - 4$

E  $80 \div n \cdot 0.5$

F  $4 + n \div \frac{1}{2}$

5

10

20

- 19 Select the numbers that make the expression simplify to 36.

$$60 - \left[ \begin{array}{c} 1 \\ 2 \\ 3 \\ 4 \end{array} \cdot (12 - \begin{array}{c} 1 \\ 2 \\ 3 \\ 4 \end{array}) \right]$$