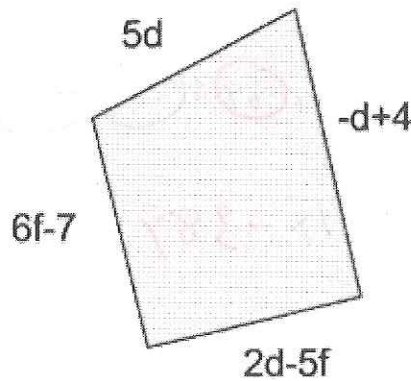


Equivalent Expressions Growth Assessment

Key

1. What is the perimeter of this polygon?



Perimeter = Add All Sides

$$5d + (-d) + 4 + 2d - 5f + 6f - 7$$

$$6d + f - 3$$

This can be written as

$$f - 3 + 6d$$

a.  $-11f - 8d - 11$

b.  $-f + 5d - 3d - 3f$

c.  $f - 3 + 6d$

d.  $2d - 4f$

e. I don't know.

2. Ashley is working on a math project. She has  $n$  feet of yarn. While working, she realized that she needs  $\frac{1}{2}$  more yarn than she currently has. Which expression represents the total amount of yarn she needs for her project?

A.  $n + \frac{1}{2}$

B.  $\frac{3}{2}n$

C.  $\frac{1}{2}n$

D.  $\frac{3}{2} + n$

e. I don't know.

$$n + \frac{1}{2}n$$

$$\downarrow$$

$$\frac{3}{2}n + \frac{1}{2}n$$

$$\rightarrow \left(\frac{2}{2} + \frac{1}{2}\right)n = \frac{3}{2}n$$

3. Select the expression equivalent to

$$4(x - 7) + 8.$$

A.  $4x - 47 + 8$

B.  $4(x - 15)$

C.  $4x - 7 + 8$

D.  $4x - 28 + 8$

E. I don't know.

$$4x - 28 + 8$$

4. Select the expression equivalent to  $-4(3x+2y) + 6(-2x-5y)$

A.  $-62xy$

B.  $-24x - 3y$

C.  $-24x + 13y$

D.  $-24x - 38y$

E. I don't know.

$$\begin{aligned}
 & (-12x) + (-8y) + (-12x) + (-30y) \\
 & -24x - 38y
 \end{aligned}$$

5. Which statement is equivalent to the expression below?

$$a + 0.5a$$

a. 0.5 times  $a$

b. 1.5 times  $a$

c. 0.5 units more than  $a$

d. 1.5 units more than  $a$

e. I don't know.

$$\begin{aligned}
 & a + .5a \\
 & \downarrow \\
 & 1a + .5a \rightarrow (1 + .5)a \\
 & \qquad \qquad \qquad 1.5a
 \end{aligned}$$

6. Simplify:  $3(2x-2) - 2(x-2)$

A.  $3x - 3$

B.  $3x - 4$

C.  $4x - 2$

D.  $4x - 4$

E. I don't know.

$$\begin{aligned}
 & (6x) - 6 - 2x + 4 \\
 & 4x - 2
 \end{aligned}$$

7. Select the expression equivalent to  $(3x+2) + (-6x+3)$

A.  $-3x + 5$

B.  $3x + 5$

C.  $9x + 5$

D.  $-9x + 5$

E. I don't know

$$-3x + 5$$

8. Select the equation below that would answer the question below...

$$2x + 11 = 59$$

"I think of a number, double it, and add 11.

My answer is 59.

What was my number?"

a.  $2(x + 11) = 59$

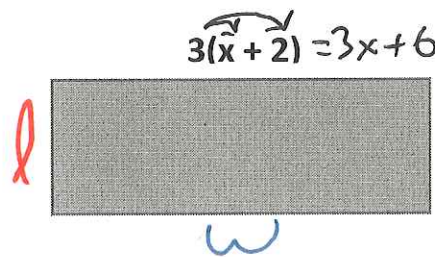
b.  $2x + 11 = 59$

c.  $2x + 22 = 59$

d.  $2x - 11 = 59$

e. I don't know.

9. Select the expression that would represent the area of the rectangle below...



$$A_{\text{Rec}} = lw$$

$$A_{\text{Rec}} = 4(3x+6)$$

$$A_{\text{Rec}} = 12x + 24$$

a.  $12x + 24$

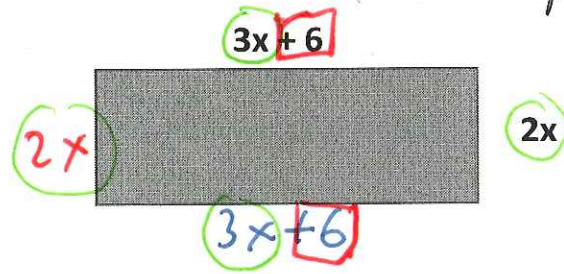
b.  $12x + 8$

c.  $3x + 10$

d.  $3x + 6$

e. I don't know.

10. Select the expression that would represent the perimeter of the rectangle below...



Perimeter = Add All sides

$$3x + 2x + 3x + 2x + 6 + 6$$

$$10x + 12$$

a.  $5x + 6$

b.  $6x + 12$

c.  $6x + 6$

d.  $10x + 12$

e. I don't know.