

## Expressions and Distributive Property

### Question 1

Which expression is equivalent to  $2.8k - 8.4$ ?

A  $0.07(4k - 12)$

**B  $0.7(4k - 12)$**

C  $5.6k$

D  $-5.6k$

$$0.7(4k - 12)$$

$$2.8k - 8.4$$

### Question 2

What is  $(-4.8y + 20.1) - (12.7y + 9.3)$ ?

**A  $-17.5y + 10.8$**

B  $-15.3y - 22$

C  $7.9y + 29.4$

D  $17.5y + 10.8$

$$-4.8y + 20.1 - 12.7y - 9.3$$

$$-4.8y - 12.7y = -17.5y$$

$$20.1 - 9.3 = 10.8$$

### Question 3

Which expression is equivalent to  $-3(-6b + 5)$ ?

A  $-18b - 15$

B  $-6b - 15$

C  $6b - 15$

**D  $18b - 15$**

$$-3 \times -6b = 18b$$

$$-3 \times 5 = -15$$

### Question 4

A rectangle has a length of  $(3.2a + 1.8b)$  centimeters. The width is half the length. Sasha writes the expression  $(12.8a + .72b)$  to represent the perimeter of the rectangle in centimeters. Is she correct?

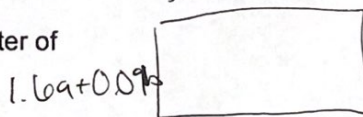
(2)

$$1.6a + 1.6a + 3.2a + 3.2a = 9.6a$$

$$0.18b + 0.18b + 0.09b + 0.09b = 0.54b$$

**NO**

$$3.2a + 0.18b$$



$$1.6a + 0.09b$$

(1)

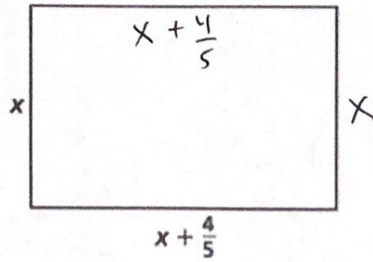
$$3.2a + 0.18b$$

$$3.2a \div 2 = 1.6a$$

$$0.18b \div 2 = 0.09b$$

Question 5

The dimensions of a rectangle are given in terms of  $x$  as shown below.



Write an expression representing the perimeter of the rectangle.

Expression  $4x + 1\frac{3}{5}$

Explain how the expression  $2(2x + \frac{4}{5})$  is equivalent to the perimeter of the rectangle.

use distributive property

Question 6

Which expression represents the product of 3 and  $(\frac{5}{4}n + 1.8)$ ?

A  $5.55n$

B  $9.15n$

C  $3.75n + 1.8$

D  $3.75n + 5.4$

$$3 \times \frac{5}{4}n = 3\frac{3}{4}n$$

$$3 \times 1.8 = 5.4$$

Question 7

Which expression is equivalent to the expression  $-3(4x - 2) - 2x$ ?

A  $-8x$

B  $-16x$

C  $-14x - 2$

D  $-14x + 6$

$$-12x + 6 - 2x$$

$$-14x + 6$$

Question 8

Which expression makes the equation true for all values of  $x$ ?

$$16x - 16 = 4(\underline{\quad ? \quad})$$

**A**  $4x - 4$

**B**  $4x - 16$

**C**  $2x - 2$

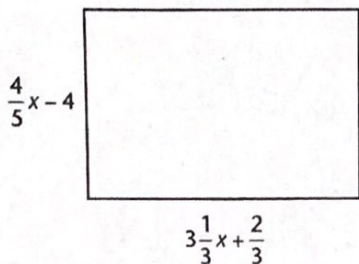
**D**  $12x - 12$

$4(4x - 4)$

$16x - 16$

Question 9

What is the perimeter of the rectangle shown below?



**A**  $8\frac{4}{15}x - 6\frac{2}{3}$

**B**  $8\frac{4}{15}x - 9\frac{1}{3}$

**C**  $4\frac{2}{15}x - 3\frac{1}{3}$

**D**  $4\frac{2}{15}x - 4\frac{2}{3}$

$2(\frac{4}{5}x - 4 + \frac{10}{3}x + \frac{2}{3})$

$\frac{8}{5}x - 8 + \frac{20}{3}x + \frac{4}{3}$

$8\frac{4}{15}x - 6\frac{2}{3}$

Question 10

Which expression below is equivalent to  $\frac{6}{7}x + 2\frac{1}{7}$ ?

**A**  $\frac{3}{7}(2x + 5)$

**B**  $\frac{1}{7}(6x + 2)$

**C**  $\frac{2}{7}(3x + 4)$

**D**  $\frac{6}{7}(x + 1\frac{2}{7})$

$\frac{3}{7} \times 2x = \frac{6}{7}x$

$\frac{3}{7} \times 5 = 2\frac{1}{7}$