

Name: Key

QCA#3 Review

Period: _____

Literal Equations:

* Undo ~~08/10~~

1. Solve the following equation for k .

- 1) A/S
- 2) M/D
- 3) E
- 4) (P)

$$\frac{y}{x} = kx$$

$$K = \frac{y}{x}$$

3. Solve the following equation for t .

$$\frac{I}{pr} = \frac{prt}{pr}$$

$$t = \frac{I}{pr}$$

5. Solve the following equation for h .

$$\frac{A}{b} = bh$$

$$h = \frac{A}{b}$$

Simplifying Expressions: 1) Distribute

2) CLT (Combine Like terms)

7. Simplify.

$$3(2x-1) - 2(x-4)$$

$$6x - 3 - 2x + 8$$

* CLT

$$4x + 5$$

9. Simplify.

$$-4(3x-1) - 3(x-2)$$

$$-12x + 4 - 3x + 6$$

$$-15x + 10$$

Isolate means same thing

2. Solve the following equation for y .

$$\frac{Ax + By = C}{-Ax} \quad \frac{-Ax}{-Ax}$$

$$\frac{By}{B} = \frac{C - Ax}{B}$$

$$y = \frac{C - Ax}{B}$$

4. Solve the following equation for b .

$$\frac{A}{h} = bh$$

$$b = \frac{A}{h}$$

6. Solve the following equation for m .

$$\frac{k}{p} = \frac{mp}{p}$$

$$m = \frac{k}{p}$$

8. Simplify.

$$5(-x+1) - (x+3)$$

$$-5x + 5 - x - 3$$

$$-6x + 2$$

10. Simplify.

$$6(2x+1) - (-x-1)$$

$$12x + 6 + x + 1$$

$$13x + 7$$

11. Simplify.

$$\begin{aligned} & -2(x+1) - (4x+4) \\ & -2x - 2 - 4x - 4 \\ & \boxed{-6x - 6} \end{aligned}$$

12. Simplify.

$$\begin{aligned} & 7(2x-1) - (2x-3) \\ & 14x - 7 - 2x + 3 \\ & \boxed{12x - 4} \end{aligned}$$

Applications:

13. The length of a rectangle is $2x-1$ and the width is $3x+2$. Write an expression for the perimeter and simplify.

$$\begin{array}{c} \text{Using picture} \\ \text{By CLT} \\ \text{Length: } 2x-1 \\ \text{Width: } 3x+2 \\ \text{Perimeter: } 10x+2 \\ \text{Base: } 2x-1 \end{array}$$

using formula

$$\begin{aligned} P &= 2l + 2w \\ P &= 2(2x-1) + 2(3x+2) \\ P &= 4x-2+6x+4 \\ P &= 10x+2 \end{aligned}$$

14. The base of a square is $3x+4$. Write an expression for the perimeter and simplify.

$$\begin{array}{c} \text{By picture} \\ \text{By CLT} \\ \text{Base: } 3x+4 \\ \text{Perimeter: } 12x+16 \end{array}$$

formula

$$\begin{aligned} P &= 4s \\ P &= 4(3x+4) \\ P &= 12x+16 \end{aligned}$$

15. The lengths of the sides of a triangle are represented by $(3x^2+1)$, (x^2+2x) and $(5x-2)$. What is the perimeter of the triangle?

$$\begin{array}{c} \text{Using picture \& CLT} \\ \text{Perimeter: } 4x^2+7x-1 \\ \text{Sides: } 3x^2+1, x^2+2x, 5x-2 \end{array}$$

Formula Add all sides

$$\begin{aligned} P &= s + s + s \\ P &= (3x^2+1) + (x^2+2x) + (5x-2) \\ P &= 4x^2+7x-1 \end{aligned}$$

16. The length of a rectangle is four more than twice the width. Write an expression to represent the perimeter and simplify.

$$\begin{array}{c} L = 2w + 4 \\ \text{Perimeter: } 2L + 2w \\ \text{Width: } w \\ \text{Length: } 2w+4 \end{array}$$

$$P = \boxed{16w+8}$$

17. The base of a rectangle is $4x-2$ and the height is $3x+5$. What is the perimeter of the rectangle in simplest form?

$$\begin{array}{c} \text{Picture \& CLT} \\ \text{Base: } 4x-2 \\ \text{Height: } 3x+5 \\ \text{Perimeter: } 14x+6 \end{array}$$

Formula

$$\begin{aligned} P &= 2(7x+3) \\ P &= \boxed{14x+6} \end{aligned}$$

18. The lengths of the sides of a triangle are represented by $(3x^2+x-4)$, (x^2+2x+1) and $(x-2)$.

What is the perimeter of the triangle?

$$\begin{array}{c} \text{Picture \& CLT} \\ \text{Sides: } 3x^2+x-4, x^2+2x+1, x-2 \\ \text{Perimeter: } 4x^2+4x-5 \end{array}$$

Formula

$$\begin{aligned} P &= s + s + s \\ P &= (3x^2+x-4) + (x^2+2x+1) + (x-2) \\ P &= 4x^2+4x-5 \end{aligned}$$