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Warmup 8/(9 × 4 ÷ 2 - 1)

- 1) SOLVE BY DIVIDING BY TWO FIRST:

$$2(x + 20) = 2x + 2$$

$$2) \text{ Solve: } \frac{2(x + 4)}{5} = x - 2$$

Three Extra Equations

$$1. x + (x + 2) + (x + 4) = 81$$

$$x = 25$$

25, 27, 29

2. Two possible ways: Distribute first, divide by 3 first

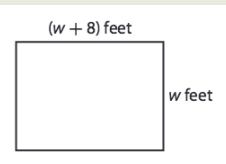
$$x = 4$$

3. Two possible ways: Change to common denominators first, multiply EVERYTHING by 6 first

$$x = \frac{1}{2}$$

$$\bullet \frac{x-4}{2} = 3 \text{ vs } \frac{x}{2} - 4 = 3$$

- A rectangular garden is fenced on all sides with 256 feet of fencing. The garden is 8 feet longer than it is wide. Find the length and width of the garden.



Find the value of x so that the polygons have the same perimeter.

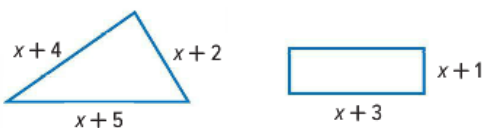


Table of Contents

p. 1	Adding & Subtracting, Equations & Expressions
p. 2	Equation Story Problems
p. 3	Solving Equations with More than one Variable

Objective:

-Solve multi-variable equations for a given variable

• If $x = y + 4$, what does y equal?

• $y = x - 4$

• If $2a = b$, what does a equal?

• $a = b/2$

Solve for x (get x alone):

1. $x - 7 = 3y$

2. $10y = 5x + 25$

3. $2y = -8 + 3x$

Solve for y (get y alone):

1. $x - 7 = 3y$

2. $10y = 5x + 25$

3. $2y = -8 + 3x$

Are we ready for 2-step ones???

1. **Solve for y :** $2y + 8 = 14x$

2. **Solve for y :** $3x + 4y = 12$

3. **Solve for a :** $24 = -2a + 4b$

4. **Solve for ☺:** $4☺ - 7 = 12⊗$

IMPORTANT CONCEPT:

• If you solve an equation like $y = 2x + 5$ for x , you're not figuring out what **number** x equals. You're just figuring out **what x is in relation to y** .

Multi-Step

1. Solve for a : $24 = -2a + 8a + 4b$

1. Solve for \odot : $\frac{3\odot - 3}{2} = 6\odot$

Temperature Conversions

- You convert from **Celsius** to **Fahrenheit** using the formula

$$F = \frac{9}{5}C + 32$$

- How do you convert from Fahrenheit to Celsius?

Homework

WORKSHEET