

Warm-Up:

Solve.

1)  $x - 13 = 42$

~~$+13$~~   
 $x = 55$

2)  $12x = 108$

~~$\frac{12}{12} x = \frac{108}{12}$~~   
 ~~$x = 9$~~

3)  $\frac{x}{5} = 75$

$x = 375$

pg 82

pg 88 #26, 48, 47

26)  $d = \text{boys}$

~~$\frac{25}{25} (\frac{2}{25} d) = (\frac{7}{14}) \frac{25}{25}$~~

$d = 175 \text{ boys}$

47)  $d = rt$

$\frac{60.5}{126} = \frac{126t}{126}$

$0.48 = t$   
secs

48)  $d = rt$

$\frac{60.5}{132} = \frac{132t}{132}$

$0.46 = t$   
secs

$0.02 \text{ secs}$



Examples:

3) Susan had a \$10 coupon for the purchase of any item. She bought a coat that was on sale for 1/2 its original price. After using the coupon, Susan paid \$125 for the coat before taxes. What was the original price of the coat?

Write an equation for the problem, then solve.

$q = \text{price of coat}$

$$\frac{1}{2}q - 10 = 125$$

---

$$\cancel{2} \left( \frac{1}{\cancel{2}} q \right) = (135) \cancel{2}$$
$$q = \$270$$

Examples:

4) Find three consecutive odd integers whose sum is 57.

$n = \text{1st integer}$

$n+2 = \text{2nd integer}$

$n+4 = \text{3rd integer}$

$$n + (n+2) + (n+4) = 57$$

$$3n + 6 = 57$$

---

$$\frac{3n}{3} = \frac{51}{3}$$

$$n = 17$$

$17, 19, 21$

Some equations may have no solution.

$$\begin{array}{r} 2x + 3 = 2x - 5 \\ \underline{-2x \quad -2x} \\ 3 \neq -5 \end{array}$$

No Solution  
 $\emptyset$

Other equations may have infinitely many solutions. These are called **identities**.

$$3x + 6 = 3(x + 2)$$

$$\begin{array}{r} 3x + 6 = 3x + 6 \\ \underline{-3x \quad -3x} \\ 6 = 6 \end{array}$$

Inf.  
Many  
Solutions

Examples:

Solve. Check your solution.

~~5)~~  $8 + 5s = 7s - 2$

6)  $\frac{1}{3}(18 + 12q) = 6(2q - 7)$

$$\begin{array}{r} 6 + 4q = 12q - 42 \\ \underline{4q \quad -4q} \\ 6 = 8q - 42 \end{array}$$

$$\begin{array}{r} 6 = 8q - 42 \\ +42 \quad +42 \\ \hline 48 = 8q \\ \frac{48}{8} = \frac{8q}{8} \\ q = 6 \end{array}$$

7)  $8(5c - 2) = 10(32 + 4c)$

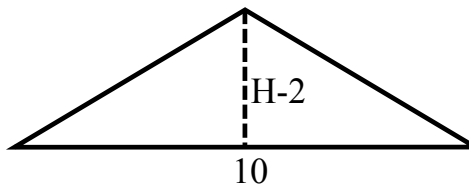
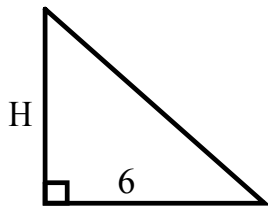
$$\begin{array}{r} 40c - 16 = 320 + 40c \\ \underline{-40c \quad -40c} \\ -16 \neq 320 \end{array}$$

No  
Solution  
 $\emptyset$

$$\begin{array}{r} 6 - 2(x + 14) = 12 \\ 6 - 2x - 28 = 12 \end{array}$$

Examples:

8) Find the value of  $H$  so that the figures have the same area.



- A) 1    B) 3    C) 4    D) 5

Homework: pg. 101-103 #12-36 even, 44, 49, 50, 52

Section 2-4, 2-5 Vocab

Quiz Next Class over Sections 2-1 through 2-5