

HW: 2.8/1-5, 8-15, 17

**Warm up:**

1) Solve for x.

$$\begin{array}{r} x + 5 = 9 \\ -5 \quad -5 \\ \hline x = 4 \end{array}$$

2) Solve for n.

$$\begin{array}{r} n + r = p \\ -r \quad -r \\ \hline n = p - r \end{array}$$

Solve for a

$$2a + bt = 9$$

$$\begin{array}{r} -bt \quad -bt \\ \hline \end{array}$$

$$\frac{2a}{2} = \frac{9 - bt}{2}$$

$$a = \frac{9 - bt}{2}$$

Solve for h

$$\frac{V}{\pi r^2} = \frac{\pi r^2 h}{\pi r^2}$$

$$\frac{V}{\pi r^2} = h ; r \neq 0$$

restrictions?

Solve for F.

$$\frac{9}{5}(C) = \left(\frac{5}{9}(F - 32)\right)\frac{9}{5}$$

$$\frac{9}{5}(C) = F - 32$$

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

Solve for t.

$$t(r) = \left(\frac{d}{t}\right)t$$

$$\frac{tr}{r} = \frac{d}{r}$$

$$t = \frac{d}{r} ; r \neq 0$$

Solve for  $l$ .

$$(1-r)(S) = \frac{(a-rl)}{1-r}$$

$$S - rS = a - rl$$

$$\frac{S - rS - a}{-r} = \frac{-rl}{-r}$$

$$\frac{S - rS - a}{-r} = l$$

$$\frac{-S + rS + a}{r} = l ; r \neq 0$$

Solve for x.

$$\begin{array}{r}
 ax = c - bx \\
 +bx \quad +bx \\
 \hline
 ax + bx = c \\
 (a+b)x = c \\
 \frac{(a+b)x}{a+b} = \frac{c}{a+b} \\
 \hline
 x = \frac{c}{a+b} ; a \neq -b
 \end{array}$$

$$\begin{array}{r}
 3x = 8 - 2x \\
 +2x \quad +2x \\
 \hline
 5x = 8
 \end{array}$$

$$\begin{array}{r}
 a+b \neq 0 \\
 -b \quad -b \\
 \hline
 a \neq -b
 \end{array}$$

## **HW Solutions**

10)  $c = 6$

11)  $m = 4$

12)  $x = 1$

13)  $t = 4$

20)  $m = 4$

21)  $a = 1$

22)  $x = 8$

25) no solution

27) infinitely many solutions

29)  $f = -25$



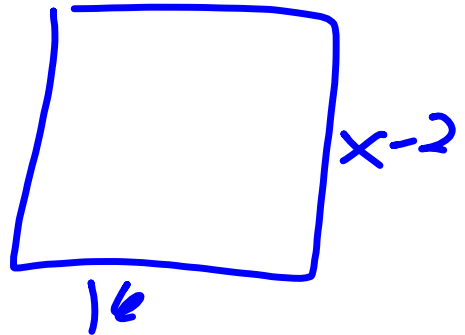
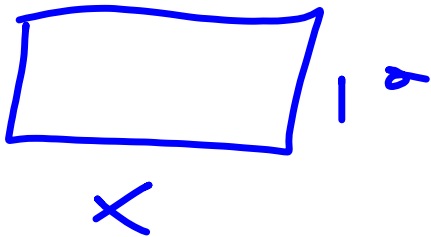
$$5 \left( \frac{3}{5}f + 24 \right) = \left( 4 - \frac{1}{5}f \right) 5$$

$$\begin{array}{r} 3f + 120 = 20 - f \\ + f \qquad \qquad \qquad - f \\ \hline \end{array}$$

$$\begin{array}{r} 4f + 120 = 20 \\ -120 - 120 \\ \hline \end{array}$$

$$\frac{4f}{4} = \frac{-100}{4} \quad f = -25$$

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$$\begin{aligned} 12x &= 16(x-2) \\ 12x &= 16x - 32 \\ -14x &= -16x \\ \hline -4x &= -32 \\ \frac{-4x}{-4} &= \frac{-32}{-4} \end{aligned}$$

$$x = 8$$

$$\textcircled{2} \quad 6(3a+1) - 30 = 3(2a-4)$$

$$18a + 6 - 30 = 6a - 12$$

$$\begin{array}{r} 18a - 24 = 6a - 12 \\ -6a \qquad \qquad -6a \\ \hline \end{array}$$

$$\begin{array}{r} 12a - 24 = -12 \\ +24 \quad +24 \\ \hline \end{array}$$

$$\frac{12a}{12} = \frac{12}{12} \quad \textcircled{a=1}$$

②

$$-5(3-q) + 4 = 5q - 11$$

$$-15 + 5q + 4 = 5q - 11$$

$$5q - 11 = 5q - 11$$

$$\begin{array}{r} -5q \qquad \qquad -5q \\ \hline -11 = -11 \end{array}$$

infinitely many solutions

Q3

$$2x = 2(x - 3)$$

$$2x = 2x - 6$$

$$\begin{array}{r} -2x \quad -2x \\ \hline \end{array}$$

$$0 = -6$$

no solution

Q4

$$3(3m - 2) = 2(3m + 2)$$

$$9m - 6 = 6m + 4$$

$$\begin{array}{r} -6m \quad -6m \\ \hline \end{array}$$

$$\begin{array}{r} 3m - 6 = 4 \\ +9 \quad +9 \\ \hline \end{array}$$

$$\frac{3m}{3} = \frac{12}{3}$$

$$m = 4$$

$$\begin{array}{r} \textcircled{13} \quad 6 + 3t - 8t - 14 \\ \quad \quad - 3t - 3t \\ \hline 6 - 5t - 14 \\ +14 \quad \quad +14 \\ \hline 20 = 5t \\ \frac{20}{5} = \frac{5t}{5} \\ \hline \textcircled{4 = t} \end{array}$$