Warm-up 9-18

Solve the following equations.

1. $-20 = -4x - 6x$

2. $p - 4 = -(9 + 2p)$

3. $12 = 4(-6x - 3)$

4. $3n - 5 = -8(6 + 5n)$

Warm-up 9-18

Solve the following equations.

1. $-20 = -4x - 6x$

$\frac{-20}{-10} = \frac{-10x}{-10}$

$2 = x$ $x = 2$

2. $p - 4 = -(9 + 2p)$

$p - 4 = -9 - 2p$

$+2p \quad +2p$

$3p - 4 = -9$

$+4 \quad +4$

$\frac{3p}{3} = \frac{-5}{3}$ $p = -5/3$

3. $12 = 4(-6x - 3)$

$12 = -24x - 12$

$+12 \quad +12$

$\frac{24}{-24} = \frac{-24x}{-24}$

$-1 = x$ $x = -1$

4. $3n - 5 = -8(6 + 5n)$

$3n - 5 = -48 - 40n$

$+40n \quad +40n$

$43n - 5 = -48$

$+5 \quad +5$

$\frac{43n}{43} = \frac{-43}{43}$

$n = -1$

Warm-up 9-18

Solve the following equations.

1. $-20 = -4x - 6x$

$\frac{-20}{-10} = \frac{-10x}{-10}$

$2 = x$ $\quad x = 2$

2. $p - 4 = -1(9 + 2p)$

$p - 4 = -9 - 2p$

$+2p \qquad +2p$

$3p - 4 = -9$

$+4 \qquad +4$

$\frac{3p}{3} = \frac{-5}{3}$ $\quad p = -\frac{5}{3}$

3. $12 = 4(-6x - 3)$

$12 = -24x - 12$

$+12 \qquad +12$

$\frac{24}{-24} = \frac{-24x}{-24}$

$-1 = x$ $\quad x = -1$

4. $3n - 5 = -8(6 + 5n)$

$3n - 5 = -48 + -40n$

$-3n \qquad -3n$

$-5 = -48 - 43n$

$+48 \qquad +48$

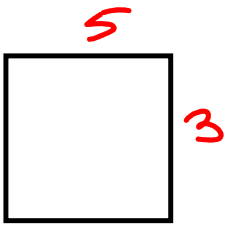
$\frac{43}{-43} = \frac{-43n}{-43}$ $\quad n = -1$

Section 2.4:

Today's Goal

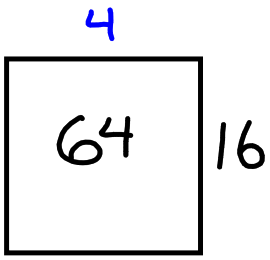
To be able to solve for a specific variable in a Literal Equation.

$A = l\,w$



$A=(5)(3)$

$A=15$



$\frac{A}{l} = \frac{l\,w}{l}$

$\frac{A}{l} = w$

$w = \frac{64}{16}$

Section 2.4: Using Formulas and Solving Literal Equations

$A = lw$ $V = lwh$

$x = \frac{-b \pm \sqrt{b^2-4ac}}{2a}$ $\frac{|t - e|}{t} \times 100$

Literal Equations

- equations with actual meanings
- each variable stands for a specific Value
- Solving the literal equations means solving for one of the variables
- end up with an equation

L+ W =Y Solve for W

$-L \quad -L$

$W = Y - L$

$tu = 2m + y$ solve for u.

$\frac{}{t} \quad \frac{}{t}$

$u = \frac{2m+y}{t}$

$\frac{1(xy)}{m} = k^m$ solve for y

$\frac{xy}{x} = \frac{km}{x}$

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

2. $2B+2H = P$ solve for H

$-2B \quad -2B$

$\frac{2H}{2} = \frac{P-2B}{2}$

$H = \frac{P-2B}{2}$

3. $2m + 3 = n$ Solve for m

4. $\frac{6g}{f} = h$ solve for g

5. $\frac{2}{w} - y = z$ solve for w

$\frac{2}{w} + y + y$

$\frac{2}{w} = (z+y)w$

$\frac{2}{(z+y)} = \frac{(z+y)w}{(z+y)}$

$w = \frac{2}{z+y}$

6. $r + \frac{s}{t} = u$ solve for t.

3. $2m + 3 = n$ Solve for m

$-3 \quad -3$

$\frac{2m}{2} = \frac{n-3}{2}$

$m = \frac{n-3}{2}$

4. $\frac{6g}{f} = h$ solve for g

$\frac{6g}{6} = \frac{fh}{6}$

$g = \frac{fh}{6}$

5. $\frac{z}{w} - y = z$ solve for w

$+y \quad +y$

$\frac{z}{w} = z + y$

$\frac{1}{w} = \frac{z+y}{z}$ $\quad w = \frac{z}{z+y}$

6. $r + \frac{s}{t} = u$ solve for t.

$-r \quad \cdot t \quad -r$

$\frac{s}{t} = (u-r)t$

$\frac{s}{u-r} = \frac{(u-r)t}{(u-r)}$

$t = \frac{s}{u-r}$

Solve

1. d = rt for t

2. p = 144/y for y

3. r = Cs/d for C

4. V = lwh for w

Solve

1. d = rt for t

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

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

2. p = 144/y for y

$(y)\,p = \frac{144}{y}\,(y)$

$\frac{py}{p} = \frac{144}{p}$

$y = \frac{144}{p}$

3. r = Cs/d for C

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

$C = \frac{dr}{s}$

4. V = lwh for w

$\frac{V}{lh} = \frac{lwh}{lh}$

$w = \frac{V}{lh}$

$V = \frac{s}{d}$

1. If s=10 and d=5 what V=?

2. If d=8 and V=7 what s=?

$F = ma$

3. F= 5 and m=10 what a=?

4. a=240 and m=60 what F=?

$V = \frac{s}{d}$

1. If s=10 and d=5 what V=?

$V = \frac{10}{5} = 2$

2. If d=8 and V=7 what s=?

(d) $V = \frac{s}{d}$ (d)

$s = vd$

$s = 8(7) = 56$

$F = ma$

3. F= 5 and m=10 what a=?

$\frac{F}{a} = \frac{ma}{a}$

$m = \frac{F}{a}$ $m = \frac{5}{10} = \frac{1}{2}$

4. a=240 and m=60 what F=?

$F = ma$

$F = 240(60) = 14400$

Classwork

pg. 51-52

#1-6, 30-37

Homework

pg. 51-52 #9-15, 30-32

and Worksheet

Kuta Software - Infinite Algebra 1

Name_____

Date_____ Period____

Two-Step Equations

Solve each equation.

1) $6 = \frac{a}{4} + 2$

2) $-6 + \frac{x}{4} = -5$

3) $9x - 7 = -7$

4) $0 = 4 + \frac{n}{5}$

5) $-4 = \frac{r}{20} - 5$

6) $-1 = \frac{5 + x}{6}$

7) $\frac{v + 9}{3} = 8$

8) $2(n + 5) = -2$

Kuta Software - Infinite Algebra 1

Name_____

Date_____ Period____

Two-Step Equations

Solve each equation.

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9) $-8 = -(x + 4)$

10) $12 = -4(-6x - 3)$

11) $14 = -(p - 8)$

12) $-(7 - 4x) = 9$

13) $-18 - 6k = 6(1 + 3k)$

14) $5n + 34 = -2(1 - 7n)$

15) $2(4x - 3) - 8 = 4 + 2x$

16) $3n - 5 = -8(6 + 5n)$

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Two-Step Equations

Date_____ Period____

Solve each equation.

1) $6 = \frac{a}{4} + 2$

{16}

2) $-6 + \frac{x}{4} = -5$

{4}

3) $9x - 7 = -7$

{0}

4) $0 = 4 + \frac{n}{5}$

{−20}

5) $-4 = \frac{r}{20} - 5$

{20}

6) $-1 = \frac{5 + x}{6}$

{−11}

7) $\frac{v + 9}{3} = 8$

8) $2(n + 5) = -2$

{−6}

9) $-8 = -(x + 4)$

{4}

10) $12 = -4(-6x - 3)$

{0}

11) $14 = -(p - 8)$

{−6}

12) $-(7 - 4x) = 9$

{4}

13) $-18 - 6k = 6(1 + 3k)$

{−1}

14) $5n + 34 = -2(1 - 7n)$

{4}

15) $2(4x - 3) - 8 = 4 + 2x$

{3}

16) $3n - 5 = -8(6 + 5n)$

{−1}