

Simplify each using order of operations.

1.) $10 + 20 \div (2 + 3 \cdot 6)$

$$10 + \frac{20}{2 + 3 \cdot 6}$$

$$10 + \frac{20}{20} \quad 10 + 1 = \boxed{11}$$

2.) $10 - 3 + 6 - 2 + 1$

$$\boxed{12}$$

Write an equation that represents each situation. Define your variables.

3.) There are 7 days in a week. Write an equation for the number of days in an unknown number of weeks. ()

$$d = 7w$$

$$d = \text{days}$$

$$w = \text{weeks}$$

4.) There are 60 seconds in a minute. Write an equation for the number of minutes in an unknown number of seconds. ()

$$m = \text{min}$$

$$s = \text{seconds}$$

$$m = \frac{s}{60}$$

5.) Evaluate each expression for: $X = -2$ $Y = 7$ $Z = -3$

a. $2X^2 + Y$

$$2(-2)^2 + (7)$$

$$8 + 7 = 15$$

$X = -2$ $Y = 7$ $Z = -3$

b. $XY - Z$

$$(-2)(7) - (-3)$$

$$-14 + 3 = -11$$

$X = -2$ $Y = 7$ $Z = -3$

c. $XZ^2 + |YX - Z|$

$$(-2)(-3)^2 + |(7)(-2) - (-3)|$$

$$-18 + |-11|$$

$$-18 + 11$$

$$\boxed{-7}$$

1.) A plumber charges \$75 to come to your house and \$35 an hour for repairs. If the plumber charged you \$355 write and solve an equation to find the number of hours they must have worked on your repairs.

$$75 + 35x = 355$$

$$\begin{array}{r} 75 \\ -75 \\ \hline 35x = 280 \end{array}$$

$$\begin{array}{r} 35 \\ \overline{) 280} \\ 35 \\ \hline \end{array} \quad \boxed{x = 8 \text{ hrs}}$$

Section 2.2-2.3: Two-Step/Multi-Step Equations

Solve this equation and check your answer.

$$1.) \left(\frac{x - 5.4}{7.1} \right) = 3 \quad | X = 26.7$$

$$x - 5.4 = 21.3$$

$$+ 5.4 \quad + 5.4$$

Solve this equation and check your answer.

$$2.) 7 + 2(3x + 2) - 3x = 24$$

$$7 + 6x + 4 - 3x = 24$$

$$3x + 11 = 24$$

$$3x = 13$$

$$x = \frac{13}{3}$$

Solving is Order of Operations in Reverse

Work your way from FAR away from to the variable to CLOSE to the variable!

$$3.) \frac{5C + 12}{11} = 70$$

$$5C + 12 = 770$$

$$5C = 758$$

$$C = 151.6$$

Solving 2-step Equations

You almost always save what step for last?

moving the coefficient

What do you move last?

$$4.) 8 - 4Q = 6$$

$$-8 \quad -8$$

$$-4Q = -2$$

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

$$5.) \frac{M}{3} + 5 = 13$$

$$-5 \quad -5$$

$$\frac{M}{3} = 8$$

$$3 \quad 3$$

$$M = 24$$

Solve each equation.

1. $56 = 4 - 5p$

$$\begin{array}{r} -4 -4 \\ \hline 52 = -5p \\ \hline \frac{52}{-5} = \frac{-5p}{-5} \\ \hline \boxed{p = -10.4} \end{array}$$

2. $-w - 12 = -19$

$$\begin{array}{r} +12 +12 \\ \hline -w = -7 \\ \hline \boxed{w = 7} \end{array}$$

3. $13 - \frac{k}{6} = 2$

$$\begin{array}{r} -13 \quad -13 \\ \hline \cancel{K} = -11 \cdot -6 \\ \hline \cancel{K} \\ \hline K = 66 \end{array}$$

4. $\frac{-6+b}{3} = 4 \cdot 3$

$$\begin{array}{r} \cancel{3} \cdot \cancel{3} \\ \hline -6 + b = 12 \\ \hline b = 18 \end{array}$$

5. $1 + \frac{4}{3}a = 25$

$$\begin{array}{r} -1 \quad -1 \\ \hline 3 \left(\frac{4}{3}a \right) = (24) \frac{3}{4} \\ \hline \boxed{a = 18} \end{array}$$

6. $\left(\frac{m}{3} + \frac{5}{7} \right) (11) = 1$

$$\begin{array}{r} 7m + 15 = 231 \\ \hline \frac{m}{3} + \frac{5}{7} = \frac{231-15}{7} \\ \hline \frac{m}{3} + \frac{5}{7} = \frac{216}{7} \end{array}$$

$$\boxed{m = \frac{216}{7}} \cdot \frac{m}{3} = \frac{216}{7} \cdot \frac{3}{3} = \frac{216}{7} - \frac{5}{7}$$

Hwk #8 -

Sec 2-1

Pages: 77 - 79

Problems: 6, 13, 14, 21, 29, 38, 49, 74, 75

5th hour only: Practice Ch. 1 Test

IXL #3 - A.2 & I.3 (& I.2 for extra credit)