Solving 2-Step Equations:

The "usual" process:

Summary

Solving Two-Step Equations

Step 1

Use the Addition or Subtraction Property of Equality to get the term with a variable alone on one side of the equation.

Step 2

Use the Multiplication or Division Property of Equality to write an equivalent equation in which the variable has a coefficient of 1.

$$5 - 129 - 20 = 17$$

$$-129 - 15 = 17$$

$$-129 = 32$$

$$9 = -2.6$$

1. Louis had 12 goals when he was traded to a new team. He averaged 1.25 goals each game for his new team. Write and solve an equation to find out how many games built played with his new team if he ended up having a total of 42 goals for the season.

EQ:

$$\frac{1}{13} + 1.25 \times = 43 \times = 9 \text{ games}$$

$$\frac{1}{13} \times = 30$$

$$1.35 \times = 30$$

$$X = 349 \text{ games}$$

1. When the baker turned off the oven the temperature was $400\,^{\circ}F$. The oven cooled off $14\,^{\circ}F$ per min. After a while the temperature in the oven was $85\,^{\circ}F$. Write and solve an equation to find the number of minutes it took the oven to cool from $400\,^{\circ}F$ down to $85\,^{\circ}F$.

to cool from
$$400^{\circ}F$$
 down to $85^{\circ}F$.
 $400 - 14m = 85$
 $-14m = -315$
 $m = 22.5 \text{ min}$

3. One health insurance policy pays people for claims by multiplying the claim amount by 0.8 and then subtracting \$500. If a person receives a check for \$4650, how much was the claim amount?

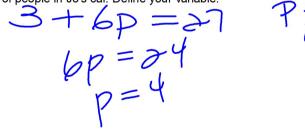
$$0.8c - 500 = 4.50$$

 $0.8c = 5750$
 $C = $1,437.5$

2. Beneath Earth's surface, the temperature increases $10^{\circ} C$ every kilometer. Suppose that the surface temperature is $22^{\circ} C$, and at the bottom of a gold mine it is $45^{\circ} C$. Write and solve an equation to find the depth of the gold mine.

$$22+10K=45$$
 $K=Km$
of the gala mine
$$K=2.3Km$$

4. A state park charges admission of \$6 per person plus \$3 for parking. Jo paid \$27 when her car entered the park. Write and solve an equation to find the number of people in Jo's car. Define your variable.



1.) Solve.

$$\frac{5}{4}$$
 $\frac{B}{11}$ $\frac{55}{4}$ $\frac{B}{11}$ $\frac{55}{4}$ $\frac{13.75}{4}$

4.) Solving problems involving many fractions.

$$\frac{3x + 3i = 10}{11}$$

$$3x + 5 = 18$$

$$3x = 13$$

$$x = 13/3, 4-3$$

Solve each.

Solve each.

2.)
$$1 + \frac{4}{3}a = 25$$
 -1
3.) $(\frac{m}{3} + \frac{5}{7} = 11)$
 $7m + 15 = 231$
 $7m = 216$
 $7m = 30.86$

$$5x(\frac{5}{21} + \frac{6}{7}x = 12) \Rightarrow 1$$

$$5 + (8x = 35) + 33(-12)$$

$$18x = 347$$

$$18x = 347$$

$$18x = 347$$

$$18x = 347$$

8.)
$$(\frac{7}{12} - \frac{3}{8}x = \frac{5}{6})^{34}$$

$$14 - 9x = 30$$

$$-14 - 14 334 \cdot \frac{3}{8}$$

$$-9x = 6$$

$$x = -\frac{1}{9} \cdot \frac{3}{3} \cdot \frac{1}{3} \cdot \frac{3}{4}$$

Hwk #10 - due Thursday

Sec 2-2

Pages 84-85

Problems 14, 15, 17-20, 40, 45, 46, 61

IXL #4 - J.3 & J.4 due Friday, Sept. 20th at 6pm!