Name:_____   Date:_____

Notes

Algebra Section 3.2

Pages 141-146

Goal: "Solve two step equations"

     "Write an equation to represent a situation"

Steps to follow:

Combine like terms first

Add or subtract

Multiply or divide

Try These:

Ex: $\frac{x}{2} + 5 = 11$ **Ex:** $5x + 9 = 24$

    $x = 12$ $x = 3$

Ex: $4y - 4 = 16$ **Ex:** $-1 = \frac{z}{3} - 7$

     $y = 5$ $z = 18$

Combine Like Terms First:

Ex: $7x - 4x = 21$ **Ex:** $4w + 2w = 24$

     $3x = 21$ $6w = 24$

      $x = 7$ $w = 4$

Ex: $8t - 3t = 35$ **Ex:** $-16 = 5d - 9d$

     $5t = 35$ $-16 = -4d$

      $t = 7$ $d = 4$

Word Problems:

Ex: The output of a function is 3 less than 5 times the input. Find the input when the output is 17.

$y = 5x - 3$
$17 = 5x - 3$
$x = 4$

Ex: The output of a function is 5 more than -2 times the input. Find the input when the output is 11.
$y = 5 + -2x$
$11 = 5 + -2x$
$x = -3$

Ex: The output of a function is 4 less than 4 times the input. Find the input when the output is 3.

$y = 4x - 4$
$3 = 4x - 4$
$x = 1\frac{3}{4}$

Ex: As a scuba diver descends into deeper waters, the pressure of the water on the scuba diver's body increases. The pressure at the surface of the water is 2117 pounds per square foot (lb/ft^2). The pressure increases at a rate of 64 pounds per square foot each foot the diver descends. Find the depth at which a diver experiences a pressure of 8517 lb/ft^2.

$2117 + 64x = 8517$
$x = 100$ feet

Ex: Kim has a job where she makes \$8/hr plus tips. Yesterday Kim made \$53, \$13 of which were in tips. How many hours did she work?

$8x + 13 = 53$
$x = 5$ hours