Homework Review - 3.5, 3.6

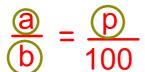
## Working with percentages:

A ratio that compares one number to 100

What is a percentage?

For comparisons - it's easy to see how ratios differ if they're compared to the same number

Why use percentages?



What do we solve for?

## Solving Percentages Using Proportions:

Set up the equation in the form shown previously. Then solve for the unknown variable...

What number is 12% of 225?

$$\frac{a}{225} = \frac{12}{100}$$

## Solving Percentages Using Equations:

Use the "Percentage   
Equation": 
$$a = p\% * b$$

What number is 15% of 80?

**1.** What percent of 125 is 25?

**2.** What percent of 70 is 14?

**5.** 3 is 2% of what number?

**6.** 384 is 64% of what number?

#### Solve Equations for Variables:

Area of a trapezoid:  $A = \frac{h}{2}(b_1 + b_2)$ . Solve for h.

Use standard steps for solving equations -

- 1. eliminate parentheses using the distributive property
- 2. combine like terms
- 3. move variables to one side of the equation and constants to the other
- 4. divide by the coefficient of the variable term

Literal Equation - uses letters instead of numbers for constants

## Solve for x:

$$4 - 10y = 22 - 6x$$

**Guitar Practice** You practice playing your guitar every day. You spend 15 minutes practicing chords and the rest of the time practicing a new song. So the total number of minutes y you practice for the week is given by y = 7(15 + x), where x is the number of minutes you spend on practicing a new song.

- **a.** Solve the equation for x.
- **b.** How many minutes did you spend on a new song if you practiced 210 minutes last week? 245 minutes? 315 minutes?

# Homework:

p. 179, 4-28 even, 33, 35, 37

p. 187, 3-19 by 3, 27, 32, 33