

Math 60, Section 2.7-2.8 Class Prep Assignment

Name: _____

Watch the videos and take notes on this page

Due at the Beginning of Next Class

Section 2.7 One-Step Equations with Percentages

Review of Percentages

Compare these two quiz scores: $\frac{42}{50}$ and $\frac{17}{20}$. Which is the higher score?

1. Complete the missing values in the tables.

Decimal	Percent
0.50	
0.93	
0.06	
1.2	

Decimal	Percent
	80%
	150%
	16.5%
	2%

Using Equations to Solve Percent Problems

$$A = P \cdot B$$

2. Write an equation and solve it algebraically. Check it mentally and write the answer in a complete sentence.

- a. What is 37% of 42?

- b. What percent of 60 is 52?

- c. 24% of what number is 50.4?

Percent Increase/Decrease

$$A = P \cdot B$$

3. The cafeteria used to sell chocolate chip cookies for \$0.75 each. They recently raised the price to \$1.00.
- What is the amount of the increase?
 - What is the percentage increase?
4. In a city there were 5,000 people unemployed which went down to 4,325 the following year.
- What was the decrease in the number of unemployed people?
 - What was the percentage decrease in unemployment?

Section 2.8 Modeling with Equations and Inequalities

**Finding an Original Price given a Percentage and the Total

5. The price of a restaurant bill, including an 18% gratuity charge was \$110.43. What was the price of the bill before the gratuity was added?

6. The company Metromile sells car insurance based on how many miles you drive rather than a fixed rate. As an example, on www.Metromile.com, it could cost \$30 per month and 3.2 cents per mile (rates may vary).

a. To compare with yearly insurance rates, let's make a table with the number of miles driven per year. Define a variable:

b. Fill in a few rows of the table to understand the pattern, and write an expression in terms of the variable in the last row.

	Cost of Insurance for 1 year	\$800

c. If you are currently paying \$800 per year with a fixed-price insurance company, how many miles would you have to drive to get a better deal with Metromile? Write an inequality. (We will not solve it yet.)

Translating Phrases

Written form

Algebraic form

Addition: The _____ of _____ and _____.

Subtraction: The _____ of _____ and _____.

Multiplication: The _____ of _____ and _____.

Division: The _____ of _____ and _____.

7. Translate the Following Expressions/Equations/Inequalities

- a. Two less than a number
- b. The product of 4 and a number is greater than 6.
- c. 45% of a number
- d. The quotient of a number and nine is 8.5.