

Math 9

Tripp

Name: \_\_\_\_\_ **KEY** \_\_\_\_\_

**Chapter 8 - Finance**

Test Date: \_\_\_\_\_

To do:

8.1 – History of Finance

- Complete Notes

8.2 – Saving Money

- Complete Notes

8.3/8.4 – Percentage Discounts/Percentage Increases

- Complete Notes
- Quiz 1

8.5 – Comparing Prices

- Complete Notes

8.6 – Banking

- Moodle Videos

8.7 – Simple Interest

- Complete Notes
- Quiz 2

Assignment # 4 (Units 7 & 8)

**Write Unit Test**

At the emergence of humanity, **bartering** was used instead of money. For example:

### **What is consumerism?**

The idea that increasing consumption of goods and services purchase in the market is always a desirable goal and that a person's wellbeing and happiness depends fundamentally on obtaining consumer good and material possessions.

### **5 Steps of Material Consumption (Watch Moodle Video)**

- 1.
- 2.
- 3.
- 4.
- 5.

### **What is minimalism?**

All about living with less, getting rid of excess stuff and living based on experiences rather than worldly possessions.

Before you can start to save money, what do you need to do???

**Needs vs. Wants**

|  |  |
|--|--|
|  |  |
|--|--|

In general, a need vs. a want is based on a \_\_\_\_\_.

**What is a budget?**

**SMART Budget:**

**S—specific**

**M—measurable**

**A—achievable**

**R—realistic**

**T—timely**

**Example:**

Calculate the total income and expenses from the following and find out how much could be budgeted to go into a savings plan.

Income: Mowing lawns (\$75), Newspaper delivery (\$50), Dog walking (\$45)

Expenses: New shirt (\$25), Transportation (\$20), Lunches (\$45)

**Net = income – expenses = (\$75 + \$50 + \$45) – (\$25 + \$20 + \$45) = \$80**

A percent is a value calculated **out of 100**, meaning 100% is a whole amount.

### Percents to Decimals

Divide the number in front of the % symbol by 100. This will move a decimal two positions left.

78%

6%

115%

**0.78****0.06****1.15**

### Decimals to Percents

Multiply the number by 100. This will move a decimal two positions right. Don't forget to include your % symbol.

0.43

2.57

0.03

**43%****257%****3%**

### Percents to Fractions

Make the number in front of the % symbol a numerator with a denominator of 100, then reduce the fraction to lowest terms.

17%

46.8%

175%

**17/100** **$46.8/100 = 117/250$**  **$175/100 = 7/4$**

## Fractions to Percents

Divide the numerator by the denominator, then multiply the value by 100. Don't forget to include a % symbol.

$$\frac{5}{6}$$

$$4\frac{8}{9}$$

$$\frac{3}{4}$$

83.33%

488.89%

75%

In order to determine and solve a percentage problem, setting up a **proportion** using equivalent ratios works the best.

$$\frac{\text{portion}}{\text{total}} = \frac{\text{portion}}{\text{total}}$$

In all cases, an unknown value in the proportion should occur, where the unknown value is in the proportion changes. Hence the approach to solving the proportion changes.

### Examples:

What number is 37% of 52?

$$\frac{37}{100} = \frac{x}{52} \rightarrow x = \frac{37 \times 52}{100} = 19.24$$

40 is what percent of 75?

$$\frac{x}{100} = \frac{40}{75} \rightarrow x = \frac{100 \times 40}{75} \approx 53.33$$

25% of what number is 16?

$$\frac{25}{100} = \frac{16}{x} \rightarrow x = \frac{16 \times 100}{25} = 64$$

Some problems are looking to either increase or decrease a value by a certain percentage.

When it comes to increasing, you must add **one** to the percentage given in order to increase the overall total.

For decreasing, you may need to subtract the percentage given from **one** in order to find the remaining amount after the decrease.

**Examples:**

15% increase of a monthly salary of \$5400. What is the new salary?

$$\$5400 \times 1.15 = \$6210$$

20% off a jacket from the original price of \$135. What is the new price?

$$\$135 \times (1 - 0.20) = \$108$$

In order to compare prices, you may need to find the unit price (A unit price is when you compare to a quantity of **one**). This can be done by dividing your ratio by a value to make the second term equal to **one**.

**Example:**

1. Which is the better buy?

1 box of 30 cookies for \$3.00

2 boxes of 20 cookies each selling for \$5.00

Option 1:  $\frac{\$3.00}{30 \text{ cookies}} = \$0.10 \text{ per cookie}$

Option 2:  $\frac{\$5.00}{40 \text{ cookies}} = \$0.13 \text{ per cookie}$

Option 1 is the better deal (more “cookie per dollar”).



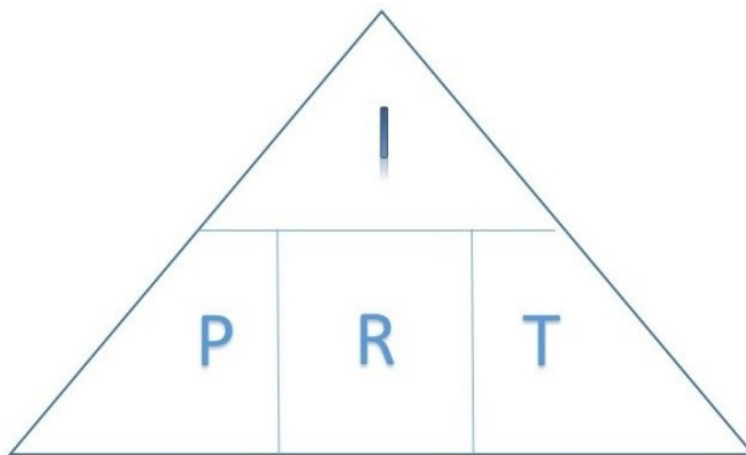
$$I = Prt$$

I = interest

P = principal (starting amount)

r = rate (expressed as decimal)

t = time (in years)



$$P = \frac{I}{RT}$$

$$R = \frac{I}{PT}$$

$$T = \frac{I}{PR}$$

Isolate or follow BEDMAS to solve the missing value!

**Examples:**

1. John borrowed \$200 from the bank for 3 years. He was charged 6% interest. How much interest did he owe? What was the total amount he had to pay back?

$$\begin{aligned}I &= Prt \\ &= (\$200)(0.06)(3) \\ &= \$36\end{aligned}$$

Therefore, he paid back  $\$200 + \$36 = \$236$ .

2. Sherry borrowed \$200 from the bank. After 3 years, he owed \$237. What rate of interest was he charged?

$$\begin{aligned}Total &= P + I \\ \$237 &= \$200 + I \\ I &= \$37\end{aligned}$$

$$\begin{aligned}I &= Prt \\ \$37 &= (\$200)(r)(3) \\ r &\approx 0.062\end{aligned}$$

Therefore, the rate charged was 6.2%.