

## Agenda

- Warm up
- Intro to Simple Interest
- Practice

**Warm Up** copy the following steps on a index card, and complete the work in your binder

1. What are the steps for solving sales tax and tips?
  - Which one do you solve first?
2. What are the steps for solving discount?
3. What are the steps for solving percent of change?

Food bill before tax: \$45  
Sales tax: 6.8% Tip: 24%

Cost of an oil change: \$21.95  
Markup: 65%

Original price of a CD: \$22.95  
Discount: 10%

# Simple Interest

$$I = Prt$$

The formula for simple interest is:  $I = P * R * T$ , where

I = Interest paid (in dollars)

P = Principal amount (the amount of money borrowed)

R = rate (change the percent to a decimal)

T = time (in years)

When the time is given in months or days, it must be converted to years.

## **STEPS TO SOLVE SIMPLE INTEREST (only 3 steps)**

- 1. Convert percent to decimal**
- 2. Input the information given**
- 3. Solve for Unknown**



Find the simple interest earned to the nearest cent for each principal, interest rate, and time

\$800, 9%, 4 years

\$280, 5.5%, 4 years

**Step 1: Convert percent (rate) to decimal**

**Step 2: input what is given**

$$I = P \times R \times T$$

**Step 3: solve.**

\$1,150, 7.6%, 5 years

\$266, 5.2%, 3 years

**Step 1: Convert percent (rate) to decimal**

**Step 2: input what is given**

$$I = P \times R \times T$$

**Step 3: solve.**

$$I = Prt$$

= \$10,500; r = 4% and t = 3 years, find the interest

***if you have \$2000 balance on your credit card with a 13% finance charge, How much interest will you pay after 2 years?***

**How much time do you have your money in savings if you have earned \$126 in interest at 5% with an initial investment of \$1,800?**

$$\underline{I = Prt}$$

$$126 = 1800 \times .05 \times t$$

$$126 = 90t$$

$$126 = 90t$$

$$90 \quad 90$$

$$1.4 \text{ years} = t$$



**Find the amount invested if  
after 4 years, you earn \$3300 in  
interest at 15%.**

$$**I = Prt**$$

$$**3300 = P \times .15 \times 4**$$

$$**\underline{3300} = \underline{.60P}**$$

$$**.60 \quad .60**$$

$$**\$5500 = P**$$

*If you buy a house for \$105,000 at a 3% interest rate, how much interest will you pay on the loan after 15 years?*





# ***Simple Interest***

**Warm up**

**Castle Learning**

**7 RP Warm up 2/7/17**