

## Review Problems for Chapter 2 TEST Percent

How do we find percent change (increase or decrease)?

Step 1: Determine start number and ending number.

From \_\_\_\_\_ to \_\_\_\_\_

Step 2: Subtract to find the difference between the two numbers

Step 3: Set up and solve this proportion.

$$\frac{\text{amount of change}}{\text{starting amount}} = \frac{n}{100} = \frac{\text{change}}{\text{starting amount}}$$

In 2019 the drama club had 62 members. In 2018 it had 50 members. Find the percent change.

How do we find percent error?

Step 1: Subtract to find the amount of error between estimate and actual amounts.

Step 2: Set up and solve this proportion.

$$\frac{\text{amount of error}}{\text{actual amount}} = \frac{n}{100} = \text{---}$$

Sara estimated that the coin jar held 789 pennies. The actual count was 892 pennies. Find her percent error.

### Simple Interest

i = money earned or paid  
P = money invested or borrowed  
r = interest rate written as a decimal  
t = number of years

Step 1: Write the formula  
Step 2: Substitute what you know  
Step 3: Solve resulting equation

Jen paid \$2480 in interest on a 3 year loan for her car. If she borrowed \$12,000, what was the simple interest rate?

**(Simple Interest)**

$i$  = money earned or paid  
 $P$  = money invested or  
borrowed  
 $r$  = interest rate written as  
a decimal  
 $t$  = number of years

Step 1: Write the formula  
Step 2: Substitute what  
you know  
Step 3: Solve resulting  
equation

Taylor invested \$4000 at 2.5%  
for 6 months. How much  
simple interest did she earn?

Find 0.2% of 168

125 out of what number is 28% ?

145% of what number is 32?

**A car costs \$32,000. If sales tax is 5%, find the amount of tax that needs to be paid.**

**Mr. Abrams wants to leave a tip for the meal that is exactly 15%. If he leaves a tip of \$24, how much was the bill?**

**The regular cost of an item is \$785. It is on sale for 35% off. Find the sale price.**

**When an item is on sale AND you have to pay sales tax, ALWAYS find the sale price first. Then calculate the tax on the sale price.**

How much will you pay?

Regular Price \$ 88  
30% OFF Sale 6% sales tax

**When an item is on sale AND you have to pay sales tax, ALWAYS find the sale price first. Then calculate the tax on the sale price.**

How much will you pay?

Regular Price \$ 400  
15% OFF Sale    5% sales tax

**ESTIMATE** - You are buying an item that regularly costs \$29.89. It is on sale for 30% OFF. About how much will you pay? Use mental math strategies(no calculator) but you **MUST** show what you did in your head.

**Favorite Colors**

5 Purple  
17 Blue  
10 Red  
18 Green

Claude claims that no more than 30% of the people surveyed chose green as their favorite color. Do you agree or disagree? Clearly defend why by clearly showing the mathematics you used to come to your decision.

**Store Sign**

↓  
All items are discounted more than 40%

Claude buys an item on sale for \$75. The regular price is \$120. Do you agree or disagree with the store's claim? Clearly show all mathematics you used to come to your decision.