First name: _____ Last name: _____ Student ID: _____

Chapter 4 Percent (2) Homework

1. Complete. Round your answer to the nearest tenth.

1. What percent of 295 is 236?	2. 168 is what percent of 420?
3. 70% of 560 is what number?	4. What percent of 64 is 148.48?
5. 150 is 100% of what number?	6. 40% of what number is 136?
7. What number is 168% of 200?	8. What percent of 9017 is 35256.47?
9. 180% of 190 is what number?	10. 338% of 31 is what number?

2. Find each percent of change. Round your answer to the nearest tenth of a percent.

$$\text{Percent Change} = \frac{|\text{New Value} - \text{Old Value}|}{\text{Old Value}} \times 100$$

1. 390 is increased to 2028	2. 93 is increased to 170.19

3. 6015 is increased to 12932.25	4. 475 is decreased to 152
5. 30 is decreased to 3	6. 96 is decreased to 67.2
7. 475 is increased to 1957	8. 390 is increased to 1599
9. 400 is decreased to 48	10. 370 is increased to 2146

3. Fill in the missing value. Assume simple interest. Interest = Principal x rate x time

1. principal interest rate time simple interest	$468,316 13% / yr _____ $243,524.32	2. principal interest rate time simple interest	$28,387 5% / yr _____ $4,258.05
3. principal interest rate time simple interest	$867,230 _____ 4 years $312,202.80	4. principal interest rate time simple interest	$96,191 4% / yr _____ $11,542.92
5. principal interest rate time simple interest	$11,450 10% / yr _____ $5,725	6. principal interest rate time simple interest	$442,992 _____ 2 years $97,458.24

Word problems

1. Mr. Snead makes $33,200 a year. His boss, Ms. Tong just gave him a raise. Now he makes $37,500 a year. His salary has increased by what percent? Round your answer to the nearest tenth of a percent.

2. Olivia is performing an experiment using gel electrophoresis. She is monitoring the migration of RNA through the gel. The shortest fragments of RNA have traveled 4.9 cm through the gel and the longest fragments have traveled only 2.7 cm. The longest fragments have traveled what percent of the distance of the shortest fragments? Round your answer to the nearest hundredth of a percent.

3. A geyser (Big Bill they call it) in Thermal Park erupts a column of water 22 feet high every 14 minutes. Another geyser in the park (called Mighty Joe) erupts a column 75 feet high every 20 minutes. The eruption cycle of Mighty Joe is what percent longer than that of Big Bill? Round your answer to the nearest hundredth of a percent.

4. A survey showed that 26.8%, or 134 of those surveyed use public transportation to travel to work. How many people were surveyed?

5. The total cost of a 5 feet long pillow is $16 including 25% sales tax. What is the price without tax?

6. The height and the base of a right angled triangle are 15 cm and 20 cm. If the height is increased by 60% and the base is reduced by 60%, what is the percent change in area?

7. Keena's brother told her that these things were true:

a) If you buy something on sale at 10% off and then you get another 15% off, you could have taken 25% off the original price.

b) If you buy something on sale at 10% off and then you pay 13% tax, you could have just added 3% to the original price.

c) If the discount at a store is 35%, you can calculate the sale price by using 65% of the original price.

d) If a smaller number is 80% of a larger one, then the larger one is 120% of smaller one.

With which do you agree? Explain why.