

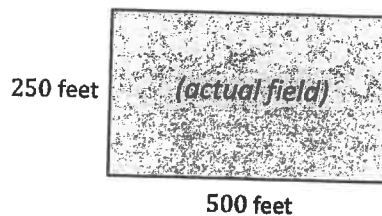
Lesson 7 Problem Set

1. A sign says that the price marked on all music equipment is 30% off the original price. You buy an electric guitar for the sale price of \$315.
 - a. What is the original price?
 - b. How much money did you save off the original price of the guitar?
 - c. What percent of the original price is the sale price?
2. A store advertises that customers can take 25% off the original price and then take an extra 10% off. Is this the same as a 35% off discount? Explain.
3. A ski shop has a markup rate of 50%. Find the selling price of skis that cost the storeowner \$300.
4. A tennis supply store pays a wholesaler \$90 for a tennis racquet and sells it for \$144. What is the markup rate?
5. A shoe store has a markup rate of 75% and is selling a pair of shoes for \$133. Find the price the store paid for the shoes.

Lesson 8 Problem Set

1. The odometer in Mr. Washington’s car does not work correctly. The odometer recorded 13.2 miles for his last trip to the hardware store, but he knows the distance traveled is actually 15 miles. What is the percent error?

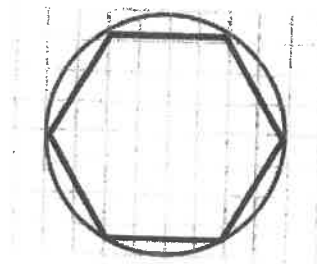
2. The actual length of a soccer field is 500 feet. A measuring instrument shows the length to be 493 feet. The actual width of the field is 250 feet, but the recorded width is 246.5 feet. Answer the following questions based on this information. Round all decimals to the nearest tenth.



- a. Find the percent error for the length of the soccer field.
- b. Find the percent error of the area of the soccer field.
- c. Explain why the values from parts (a) and (b) are different.

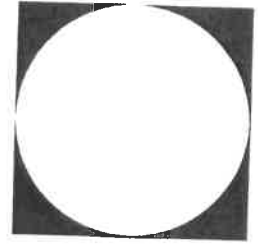
3. Kayla’s class went on a field trip to an aquarium. One tank had 30 clown fish. She miscounted the total number of clown fish in the tank and recorded it as 24 fish. What is Kayla’s percent error?

4. Sid used geometry software to draw a circle of radius 4 units on a grid. He estimated the area of the circle by counting the squares that were mostly inside the circle and got an answer of 52 square units.



- a. Is his estimate too large or too small?
- b. Find the percent error in Sid's estimation to the nearest hundredth using the π key on your calculator.

5. A circle is inscribed inside a square, which has a side length of 12.6 cm. Jared estimates the area of the circle to be about 80% of the area of the square and comes up with an estimate of 127 cm^2 .



12.6 cm

- a) Find the absolute error from Jared's estimate to two decimal places using the π key on your calculator.
- b) Find the percent error of Jared's estimate to two decimal places using the π key on your calculator.
- c) Do you think Jared's estimate was reasonable?
- d) Would this method of computing the area of a circle always be too large?
6. In a school library, 52% of the books are paperback. If there are 2,658 books in the library, how many of them are not paperback to the nearest whole number?
7. Shaniqua has 25% less money than her older sister Jennifer. If Shaniqua has \$180, how much money does Jennifer have?
8. An item that was selling for \$1,102 is reduced to \$806. To the nearest whole, what is the percent decrease?
9. If 60 calories from fat is 75% of the total number of calories in a bag of chips, find the total number of calories in the bag of chips.

Lesson 10 Problem Set

1. Enrique takes out a student loan to pay for his college tuition this year. Find the interest on the loan if he borrowed \$2,500 at an annual interest rate of 6% for 15 years.
2. Your family plans to start a small business in your neighborhood. Your father borrows \$10,000 from the bank at an annual interest rate of 8% rate for **36 months**. What is the amount of interest he will pay on this loan?
3. Mr. Rodriguez invests \$2,000 in a savings plan. The savings account pays an annual interest rate of 5.75% on the amount he put in at the end of each year.
 - a. How much will Mr. Rodriguez earn if he leaves his money in the savings plan for 10 years?
***(interest)**
 - b. How much money will be in his savings plan at the end of 10 years? ***(total)**
4. When Melissa was born, her parents put \$8,000 in a college fund account that earns 9% simple interest. Find the total amount in the account after 18 years.
5. Mona opened a savings account with a \$500 deposit and a simple interest rate of 5.6%. If there were no deposits or withdrawals, how much money is in the account after $8\frac{1}{2}$ years?
6. Kelli Rae's inheritance from her great-grandmother was \$220,000 after taxes. If Kelli Rae invests this money in a savings account that earns \$18,260 in simple interest every year, what is the interest rate on her account?

Name _____

Period _____

Module 4 ~ Topic B ~ Study Guide

1) A \$350 mountain bike is discounted 25% and then discounted an additional 10% for shoppers who arrive before 5 am. What is the sale price of the bike?

2) The cost of a White Sox baseball cap is \$32. The local sporting goods store sells it for \$40. Find the percent markup.

3) The veterinarian weighed Oliver's new puppy on a defective scale. He weighed 50 pounds on that scale. However, the puppy weighs exactly 42 pounds. What is the percent of error in measurement of the defective scale to the nearest whole percent?

4) The odometer in Mr. Super's car doesn't work correctly. The odometer recorded 12.4 miles for his trip to Wal-Mart, but he knows the distance traveled is exactly 15 miles. What is the percent error rounded to the nearest whole percent?

5) Erica's parents gave her \$600 for her high school graduation. She put the money into a savings account that earned 6.5% annual interest. She left the money in the account for 5 years before she withdrew it. How much interest did the account earn?

6) Ms. Walsh wants to know how long it will take an investment of \$450 to earn \$200 in interest. The yearly interest rate is 6.5%, paid at the end of each year. Round your answer to the nearest year.

7) Lee sells electronics. Lee earns a 6% commission on all sales. If Lee sold a TV for \$1,800, how much commission did Lee earn?

8) Sarah lost her Chromebook. Her school charges 65% of the cost of the Chromebook. If Sarah has to pay \$120 for a new Chromebook, how much did the school pay for the Chromebook?