

Unit 4: Proportional Relationships and Percentages

ADVANCED

Name: _____ Date: _____

Solve each problem. Show your work on scratch paper and write the final exact answer. Round money answers to the nearest cent.

1. A jacket originally costs \$80. Its price is first increased by 25%, then the new price is decreased by 20%. What is the final price in dollars?

Answer: _____

3. A restaurant bill is \$68 before tip. A group adds an 18% tip and then splits the total equally among 4 people. How much does each person pay, in dollars?

Answer: _____

5. A town's population increased by 40% over a decade to reach 350 people. What was the population before the increase?

Answer: _____

7. In a class survey, 63 out of 180 students chose pizza. What percent of the students chose pizza?

Answer: _____

9. An item costs \$85. A 7.5% sales tax is applied, and then a 20% discount coupon is taken off the taxed total. What is the final amount paid, in dollars?

Answer: _____

2. After a 15% sales tax is added, the total price of a gadget is \$57.50. What was the pre-tax price in dollars?

Answer: _____

4. You deposit \$1,500 into an account earning 6% simple interest per year. What is the total amount (principal plus interest) in the account after 3 years, in dollars?

Answer: _____

6. A bike listed at \$240 is marked down 30%, and then that reduced price is marked down another 25%. What is the final sale price in dollars?

Answer: _____

8. An employee's salary of \$45,000 is increased by 8% at a promotion, then later decreased by 8% during budget cuts. What is the final salary in dollars?

Answer: _____

10. For some number x , 15% of x equals 9% of 500. What is the value of x ?

Answer: _____

11. How much simple interest (interest only, not the total) is earned on \$2,400 invested at 5.5% per year for 4 years, in dollars?

Answer: _____

12. An investment of \$500 grows by 20%. By what percent must the new value then decrease to return exactly to \$500? Round to the nearest tenth of a percent.

Answer: _____