Math 118 Lecture 8.1 – Percent, Sales Tax, and Discounts

Q1 What is a percent?

Q2 What is the difference between a percent and a percent rate?

General percent formula: $A = PB$

Question	Given	Percent formula
What is P percent of B?	P and B	Solve for A
A is P percent of what?	A and P	Solve for B
A is what percent of B?	A and B	Solve for P

EX 1 Answer the questions.

a) What is 8% of 300?

b) 8 is 40% of what?

c) 18 is what percent of 90?

d) What percent of 7.5 is .6?

Tax and Discount Formulas

Q3 What is Chicago's sales tax rate?

EX 2 You go to a grocery store in Chicago and spend \$53.45. What is your total bill?

EX 3 What is the total cost of a book that costs \$16.50 that is on sale for 15% off?

Percent change

Q4 A change can be considered an _____ or a _____.

Percent increase formula

Percent decrease formula

EX 4 If 6 is increased to 10, find the percent increase.

EX 5 If 6 is increased to 20, find the percent increase.

EX 6 If 10 is decreased to 6, find the percent decrease.

EX 7 If 20 is decreased to 6, find the percent decrease.

EX 8 A jacket regularly sells for \$135.00 The sale price is \$60.75. Find the percent decrease of the sale price from the regular price.

Percents of Percents

EX 9 John Tesh, while he was still coanchoring *Entertainment Tonight*, reported that the PBS series *The Civil War* had an audience of 13% versus the usual 4% PBS audience, "an increase of more than 300%." Did Tesh report the percent increase correctly?

EX 10 A politician states, "If you elect me to office, I promise to cut your taxes for each of my first three years in office by 10% each year, for a total reduction of 30%." Evaluate the accuracy of the politician's statement.