Section 7.3 General Applications of Percents

1. Vocabulary: The following translations of certain English words to mathematical symbols will be helpful to you in solving word problems that involve percents.

English word	Math symbol
is	=
of	$\bullet$
a number	n
what number	n
what percent	n

Percent problems involve three quantities: a percent, a base (usually a beginning quantity or a quantity used as a base for comparison), and a final amount (usually the final quantity or the ending quantity). In general, the percent times the base equals the amount. In symbols: $A = P \bullet B$.

2. Applications: To solve percent problems, translate the word problems into equations and then solve the equations.

Example 1: Solve each application problem by setting up an equation, and then solving the equation. Use the proper format: Write a statement identifying the quantity that your variable stands for, set up an equation, solve the equation, and then write your solution in English words.

a. Forty percent of the students in a particular class made an A or B on Test One. If there were 35 students in the class, how many students made an A or B?

b. A certain meal contains 850 calories, 255 of which come from protein. What percentage of the calories is from protein?