

# Tips for Teachers

## Chapter 6 Percent Notation

### Section 6.3 Solving Percent Problems Using Equations

#### Translating to Equations

Some students will have difficulty translating percent problems to equations. For those students, it might be helpful to learn to recite the following statement as they translate:

$$a \text{ is } n\% \text{ of } b.$$

Point out that this can also be expressed in reverse order:  $n\%$  of  $b$  is  $a$ . Then, given two of the three numbers  $a$ ,  $b$ , and  $c$ , we can substitute accordingly to translate to an equation.

#### An Example

Consider the following example:





16% of what is 8?

We see that  $n$  is 16,  $b$  is unknown, and  $a$  is 8. Write:

$$\begin{array}{c} n\% \text{ of } b \text{ is } a. \\ \downarrow \downarrow \downarrow \downarrow \downarrow \\ 16\% \cdot b = 8 \end{array}$$

Emphasize that the best way to become comfortable with translating percent problems to equations is to practice. Go over as many sample translations as time allows in class and encourage your students to work through the margin exercises and the exercises in the exercise set in the text.

#### Supplement Key Further Instruction and Practice for Your Students

Video	Audio cassette	MathMax CD-ROM	InterAct Math Online Exercises	Printed Test Bank/ Instructor's Resource Guide	
				Exercises	Chapter Review
Tape 10	10A	Section 6.3		p. 633	p. 718

### Section 6.5 Applications of Percent: Percent of Increase or Decrease

An error that students commonly make when solving applied problems involving percent of increase or decrease is using the wrong base amount when doing the computation.

#### Using the Correct Base Amount

Recall that to find a percent of increase or decrease we find the amount of increase or decrease and then determine what percent this is of the *original* amount. Students, however, often use the *new* amount when determining the percent of increase or decrease.

To help students overcome this difficulty, set up as many sample computations in class as time permits. That is, spend time *setting up* a large number of computations, but don't necessarily spend time carrying out all of them.

**A Template for Examples**

Some templates that can be used for these examples follow.

The amount in a savings account increased from \$ \_\_\_\_ to \$ \_\_\_\_\_. What was the percent of increase?

The the populations of a city increased/decreased from \_\_\_\_ to \_\_\_\_\_. What was the percent of increase/decrease?





Casey’s salary increased from \$ \_\_\_\_ to \$ \_\_\_\_\_. What was the percent of increase?

During a sale, the price of a suit was marked down from \$ \_\_\_\_ to \$ \_\_\_\_\_. What was the percent of decrease?

The value of a copier decreased from \$ \_\_\_\_ to \$ \_\_\_\_ during its first year of use. What was the percent of decrease?

Pat’s hourly wage increased from \$ \_\_\_\_ to \$ \_\_\_\_\_. What was the percent of increase?

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				Exercises	Chapter Review
Tape 11	10B	Section 6.5		p. 633	p. 718