

## Lesson 29: Solving Percent Problems

### Classwork

#### Exploratory Challenge 1

*Claim: To find 10% of a number, all you need to do is move the decimal to the left once.*

Use at least one model to solve each problem (e.g., tape diagram, table, double number line diagram,  $10 \times 10$  grid).

a. Make a prediction. Do you think the claim is true or false? \_\_\_\_\_ Explain why.

b. Determine 10% of 300. \_\_\_\_\_

c. Find 10% of 80. \_\_\_\_\_

d. Determine 10% of 64. \_\_\_\_\_

e. Find 10% of 5. \_\_\_\_\_

f. 10% of \_\_\_\_\_ is 48.

g. 10% of \_\_\_\_\_ is 6.

- h. Gary read 34 pages of a 340 pages book. What percent did he read?
- i. Micah read 16 pages of his book. If this is 10% of the book, how many pages are in the book?
- j. Using the solutions to the problems above, what conclusions can you make about the claim?

### Exploratory Challenge 2

*Claim: If an item is already on sale and then there is another discount taken off the new price, this is the same as taking the sum of the two discounts off the original price.*

Use at least one model to solve each problem (e.g., tape diagram, table, double number line diagram,  $10 \times 10$  grid).

- a. Make a prediction. Do you think the claim is true or false? \_\_\_\_\_ Explain.
- b. Sam purchased 3 games for \$140 after a discount of 30%. What was the original price?

- c. If Sam had used a 20% off coupon and opened a frequent shopper discount membership to save 10%, would the games still have a total of \$140?
- d. Do you agree with the claim? \_\_\_\_\_ Explain why or why not. Create a new example to help support your claim.

**Lesson Summary**

Percent problems have three parts: whole, part, percent.

Percentage problems can be solved using models such as ratio tables, tape diagrams, double number line diagrams, and  $10 \times 10$  grids.

**Problem Set**

1. Henry has 15 lawns mowed out of a total of 60 lawns. What percent of the lawns does Henry still have to mow?
2. Marissa got an 85% on her math quiz. She had 34 questions correct. How many questions were on the quiz?
3. Lucas read 30% of his book containing 480 pages. What page is he going to read next?