

# Solving Proportions Using Cross Products

Solve each proportion using cross products. Round to the nearest hundredth as needed.

1.  $\frac{r}{45} = \frac{90}{270}$  \_\_\_\_\_

2.  $\frac{32}{h} = \frac{5.9}{12}$  \_\_\_\_\_

3.  $\frac{45}{60} = \frac{81}{g}$  \_\_\_\_\_

4.  $\frac{78}{y} = \frac{98}{100}$  \_\_\_\_\_

5. **Number Sense** Are the two ratios that make up a proportion always, sometimes, or never equivalent? \_\_\_\_\_

The weight of objects on Earth would vary on other planets. This is due to the different gravitational force on each planet. The weight of objects on other planets can be determined by solving proportions.

6. An object that weighs 10 lb on Earth weighs 9 lb on Venus. What would an object that weighs 90 lb on Earth weigh on Venus? \_\_\_\_\_
7. An object that weighs 100 lb on Earth weighs 112.5 lb on Neptune. What would an object that weighs 50 lb on Earth weigh on Neptune? \_\_\_\_\_
8. An object that weighs 234 lb on Jupiter weighs 100 lb on Earth. What would an object that weighs 400 lb on Jupiter weigh on Earth? (Round your answer to the nearest hundredth.) \_\_\_\_\_

## Test Prep

9. Cecelia has read 12 books this summer and has collected 72 tokens from the library's summer reading program. Which of the following shows how to solve for the number of tokens rewarded for each book?

A.  $\frac{12}{72} = \frac{t}{1}$

B.  $\frac{12}{1} = \frac{t}{72}$

C.  $\frac{12}{72} = \frac{1}{t}$

D.  $\frac{1}{12} = \frac{72}{t}$

10. **Writing in Math** Explain how you would use mental math to solve the proportion  $\frac{75}{w} = \frac{1}{2}$ .

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