

Worksheet 15 $\frac{\text{percent}}{100} = \frac{\text{part}}{\text{whole}}$ **Use a calculator!**

Use cross products *or* equivalent fractions to solve. You can use a calculator; round your answer to the nearest tenth if necessary.

- 1) Sandra and Shelly each solved a percent problem a different way. Who is correct? Explain your reasoning.


Problem: What is 125% of 40?

Sandra's Work	Shelly's Work
$\frac{125}{100} = \frac{40}{x}$	$\frac{125}{100} = \frac{x}{40}$
$125x = 4000$	$100x = 5000$
$x = 32$	$x = 50$

- 2) Arnold surveyed 60 band members about their favorite class other than band. The results are shown in the table. Find the percent of students who favor each class. Show all work necessary to justify your answer.
- 3) Emily has a collection of soccer balls. Twelve of her soccer balls are pink. These make up 40% of her collection. How many soccer balls are in Emily's collection? Use mathematics to justify your answer.

Favorite Class

Math	24
Art	6
English	18
P.E.	12

- 4)  The United States has a total land area of 9,161,923 square miles. Find the percent of area covered by each of the states below. Round your answer to the nearest tenth of a percent.
- Alaska: 571,951 square miles
Texas: 261,797 square miles
California: 163,696 square miles
New York: 54,556 square miles

- 5) The Mississippi River is about 90% as long as the Missouri River. The Mississippi River is 2,340 miles long. Find the length of the Missouri River. Show all work necessary to justify your answer.

- 6) Lola interviewed 40 people about their homework habits. She recorded the data as shown. Use the percents to find how many students responded in each category. Use mathematics to justify your answers.

Homework Habits

I do homework right after school	25%
I do homework right before going to bed	10%
I do homework at school	40%
I don't do homework	15%
Other	10%

- 7) Maggie ran a dog walking service. On Thursday she found that only 80% of her customers were prepared for her to walk their dog. Use this to predict how many customers' dogs will be ready to walk on Friday if she has 15 customers that day. Use mathematics to justify your answer.
- 8) A model of a statue has a scale to the actual statue of 1 inch : 8 inches. What percent of the actual statue's height is the model statue's height? Show all work necessary to justify your answer.