

Lesson 26: Percent of a Quantity

Classwork

Example 1

Five of the 25 girls on Alden Middle School's soccer team are 7th grade students. Find the percentage of 7th graders on the team. Show two different ways of solving for the answer. One of the methods must include a diagram or picture model.

Example 2

Of the 25 girls on the Alden Middle School soccer team, 40% also play on a travel team. How many of the girls on the middle school team also play on a travel team?

Example 3

The Alden Middle School girls' soccer team won 80% of its games this season. If the team won 12 games, how many games did it play? Solve the problem using at least two different methods.

Exercises

1. There are 60 animal exhibits at the local zoo. What percent of the zoo's exhibits does each animal class represent?

| Exhibits by Animal Class | Number of Exhibits | Percent of the Total Number of Exhibits |
|--------------------------|--------------------|---|
| Mammals | 30 | |
| Reptiles & Amphibians | 15 | |
| Fish & Insects | 12 | |
| Birds | 3 | |

4. Purchasing a TV that is 20% off will save \$180.
- a. Name the different parts with the words: PART, WHOLE, PERCENT.

20% off \$180 Original Price

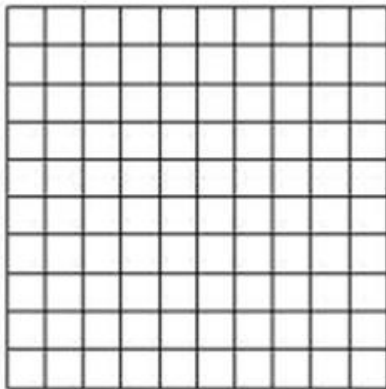
- b. What was the original price of the TV? Show two methods for finding your answer.

Lesson Summary

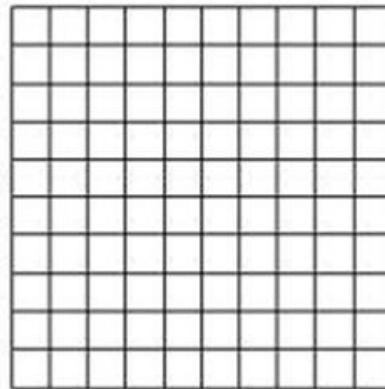
Models and diagrams can be used to solve percent problems. Tape diagrams, 10×10 grids, double number line diagrams, and others can be used in a similar way to using them with ratios to find the percent, the part, or the whole.

Problem Set

1. What is 15% of 60? Create a model to prove your answer.
2. If 40% of a number is 56, what was the original number?
3. In a 10×10 grid that represents 800, one square represents _____.
Use the grids below to represent 17% and 83% of 800.



17%



83%

17% of 800 is _____.

83% of 800 is _____.