

In this 18-lesson module, students deepen their understanding of ratios and proportional relationships as they explore a variety of percent problems. They convert between fractions, decimals, and percents to further develop a conceptual understanding of percent and use algebraic expressions, equations and other models such as tape diagrams as tnms as tnm

## What is the whole unit in each scenario?

\*The number or quantity that another number or quantity is called the whole. Solution: \*

## Part of a Whole as a Percent

Brad put 10 crickets in his pet lizard's cage. After one day, Brad's lizard had eaten 20% of the crickets he had put in the cage. By the end of the next day, the lizard had eaten 25% of the remaining crickets. How many crickets were left in the cage at the end of the second day?

Solution:

**Day 1:**  
 $n = 0.2(10)$   
 $n = 2$   
 At the end of the first day, Brad's lizard had eaten 2 of the crickets.

**Day 2:**  
 $n = 0.25(10 - 2)$   
 $n = 1.25$   
 At the end of the second day, Brad's lizard had eaten 1.25 crickets.

Consider this: If you tried this problem and got an answer of 6 1/2 crickets, does your answer make sense? Explain.

Create a scale drawing of the picture to the right using a scale factor of 25%. Write three equations that show how you determined the lengths of three different parts of the resulting picture.

Picture

Solution:

For a review of scale drawings, refer to Module 1 topic D.