

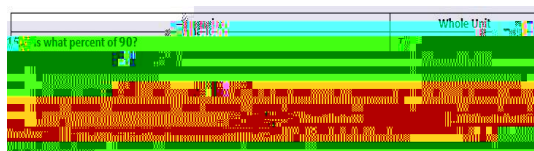
In this 18-lesson module, students deepen their understanding of ratios and proportional relationships as they explore a variety of percent problems. They convert between fractions, decimals, and percents to further develop a conceptual understanding of percent and use algebraic expressions, equations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

Solution:

Scenario	Whole Unit
15 is what percent of 90?	
What number is 10% of 40?	
90% of a number is 180.	
A bag of candy contains 300 pieces and 25% of the pieces in the bag are red.	
Seventy percent (70%) of the students earned a B on the test.	
The 20 girls	



Part of a Whole as a Percent

Brad put 100 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:

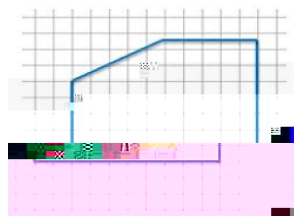
Day 1:
 $n = 0.2(100)$
 $n = 20$
 At the end of the first day, Brad's lizard had eaten 20% of the crickets.

Day 2:
 $n = 0.25(100 - 20)$
 $n = 12.5$
 At the end of the second day, Brad's lizard had eaten 25% of the remaining 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 60%. Write three equations that show how you determined the lengths of three different parts of the resulting picture.

Picture



Solution:

Scale Factor: $60\% = \frac{60}{100} = \frac{3}{5}$

Top side: $4 \times \frac{3}{5} = 2.4$

Bottom side: $6 \times \frac{3}{5} = 3.6$

Left side: $3 \times \frac{3}{5} = 1.8$

Right side: $3 \times \frac{3}{5} = 1.8$

Scale Drawing:

