CHECK UP 6.25: PERCENTAGES TO RATIOS

Convert these percentages to ratios.

50% = _____ 67% = _____

10% = _____ 33% = _____

75% = _____

Checking Ratio and Proportions

If you are not sure whether you calculated a ratio correctly, there is an easy way to check yourself.

Consider: 1:3::100:?

Suppose you thought the correct answer was 300. To check yourself, you could multiply the **means** (middle numbers) by the **extremes** (outer numbers). If you have calculated correctly, the means and extremes should be equal (Fig. 6-5).

Here are two examples to illustrate this point.

- Problem: 1:2::3:?

  Proposed answer: 1:2::3:6

  Means: $2 \times 3 = 6$

  Extremes: $1 \times 6 = 6$

  $6 = 6$, so the answer is correct

- Problem: 2:3::4:?

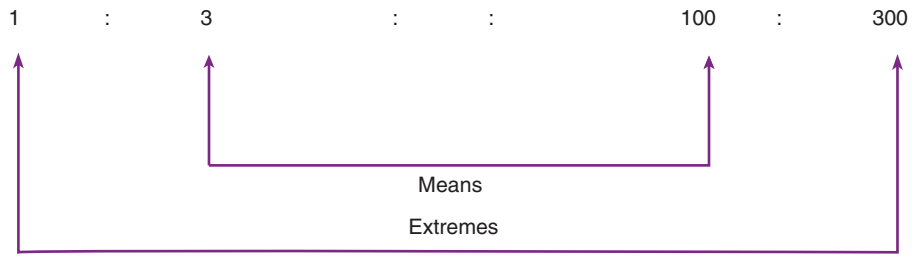
  Proposed answer: 2:3::4:7

  Means: $3 \times 4 = 12$

  Extremes: $2 \times 7 + 14$

  12 does not equal 14, so the answer is incorrect

You can also use the means and extremes method to check your work when you have an answer. In Check Up 6.26 and 6.27, test your knowledge of ratios and proportions.



Means
3 X 100 = 300

Extremes
1 X 300 = 300
300 = 300 correct

FIGURE 6-5: Means and extremes. Means and extremes check for proportions. To verify that your answer for a proportion is correct, multiply the means and the extremes. The two results should be equal.