Geometry
Unit: Similarity
Section: Ratios and Proportions

Review Worksheet - ANSWERS

Solve each proportion:

1. $\frac{10}{8} = \frac{x}{10}$

Cross multiply: 100 = 8x
Divide both sides by 8: 12.5 = x

2. $\frac{7}{x+5} = \frac{10}{5}$

Cross multiply: 7(5) = 10(x+5)
Distribute 10: 35 = 10x + 50
Subtract 50 to both sides: -15 = 10x
Divide both sides by 10: -1.5 = x

3. $\frac{x+10}{x-7} = \frac{8}{9}$

Cross multiply: 9(x+10) = 8(x-7)
Distribute 9 and 8: 9x + 90 = 8x – 56
Subtract 8x to both sides: x + 90 = -56
Subtract 90 to both sides: x = -146

4. $\frac{4}{9} = \frac{x-3}{6}$

Cross multiply: 4(6) = 9(x-3)
Distribute 9: 24 = 9x - 27
Add 27 to both sides: 51 = 9x
Divide both sides by 9: 5.67 = x

5. Mary was planning a trip to Western Samoa. Before going, she did some research and learned that the exchange rate is 6 Tala for $2. How many Tala would she get if she exchanged $10?

Set up a proportion based on the information you have: $\frac{6}{2} = \frac{x}{10}$
Cross multiply: 60 = 2x
Divide both sides by 2: 30 = x
Mary would get 30 Tala for her trip.

6. Jamie bought 32 kiwi fruit for $16. How many kiwi can Linda buy if she has $5?

Set up a proportion based on the information you have: $\frac{32}{16} = \frac{x}{5}$
Cross multiply: 160 = 16x
Divide both sides by 16: 10 = x
Linda can buy 10 kiwis.

7. If you can buy four bulbs of elephant garlic for $6, then how many can you buy with $25?

Set up a proportion based on the information you have: $\frac{4}{6} = \frac{x}{25}$
Cross multiply: 100 = 6x
Divide both sides by 6: 16.67 = x
You can buy 16 bulbs of elephant garlic with $25.

8. Marla reduced the size of a painting to a width of 3.3 in. What is the new height if it was originally 34.5 in. tall and 43.8 in. wide?

Set up a proportion based on the information you have: $\frac{3.3}{43.8} = \frac{x}{34.5}$
Cross multiply: 113.85 = 43.8x
Divide both sides by 43.8: 2.6 = x
The height of the painting would be reduced to 2.6 in.