Solving Proportion Problems

Name Solutions

1. Decide whether the proportion is true or false and then compare the cross products to verify your answer.

a.
$$2 = \frac{3}{4}$$
 +rue
1. $4 = \frac{3}{2}$ 2. 2.
 $4 = 4$

b.
$$\frac{79}{34}$$
 false $\frac{15}{18}$ $\frac{10}{12}$ true $\frac{2}{18}$ $\frac{2}{12}$ $\frac{2}{18}$ $\frac{2}{12}$ $\frac{2}{18}$ $\frac{2}{12}$ $\frac{2}{180}$ $\frac{2}{180$

2. Solve each proportion:

a.
$$\frac{7}{14} = \frac{2}{x}$$

$$\frac{1}{14} = \frac{1}{x}$$

b.
$$\frac{8}{12} = \frac{15}{15}$$
 $\frac{12 \times = 8.15}{12}$
 $\times = 10$

$$8x = 5(20)$$

$$8x = 100$$

$$x = 12.5$$

Set up a proportion to solve the following rate and proportion problems. Write your answer using a complete sentence.

3. Eduardo spent 6 hours completing 21 math problems last week. How long might he expect to spend completing 28 math problems this week?

$$\frac{6}{21} = \frac{\times}{28}$$
Aroblem

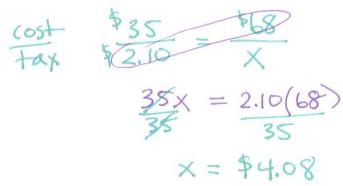
$$\frac{21}{21} = \frac{x}{28}$$

$$\frac{21}{21} = \frac{6.28}{21}$$

$$x = 8 \text{ hours}$$

 $\frac{21}{21} \times \frac{6.28}{21}$ Spend 8 hours on 28 problems

4. The sales tax on an item that costs \$35 is \$2.10. What is the sales tax on an item that costs \$68?



The sales tax is \$4.08.

5. On a map, 6 centimeters represents 2 miles. If Cowpoke Junction is 9 centimeters from Wild Bill Butte on the map, how many miles apart are these two locations?

$$\frac{6x = 2.9}{6}$$

$$x = 3 \text{ miles}$$

They are 3 miles apart.

6. Horse A can travel 40 kilometers in 4 hours. Horse B can travel 63 kilometers in 7 hours. Which horse traveled faster?

km

63km 7hrs

10 km/hr 9 km/hr Horse A traveled faster.