Lesson 6T ~ Write and Solve Proportions

Name_____ Period_____ Date_____

Solve each proportion.

1. $\dfrac{1}{4} = \dfrac{x}{12}$

Multiply the cross products. $1 \cdot 12 = $ _____ $\cdot x$

Simplify each side. $12 = 4x$

Solve for x. ____ $= x$

2. $\dfrac{5}{6} = \dfrac{10}{y}$

Multiply the cross products. $5 \cdot y = $ _____ $\cdot 10$

Simplify each side. $5y = $ _____

Solve for y. $y = $ ____

3. $\dfrac{20}{14} = \dfrac{a}{7}$

4. $\dfrac{x}{24} = \dfrac{3}{8}$

5. $\dfrac{6}{12} = \dfrac{y}{8}$

6. $\dfrac{3}{15} = \dfrac{1}{b}$

7. $\dfrac{2}{5} = \dfrac{x}{50}$

8. $\dfrac{12}{30} = \dfrac{x}{10}$

Determine whether each pair of ratios forms a proportion.

9. $\dfrac{3}{4}$ and $\dfrac{12}{16}$ Multiply the cross products. $3 \cdot 16 \overset{?}{=} 4 \cdot 12$

Are the two cross products equal?

Simplify each side. $48 \overset{?}{=} \underline{\hspace{1.5cm}}$

Do the ratios form a proportion?   YES   or   NO

10. $\dfrac{6}{9}$ and $\dfrac{4}{5}$

11. $\dfrac{5}{6}$ and $\dfrac{10}{12}$

Write a proportion for each phrase and solve it.

12. 5 feet in 1 second; 20 feet in x seconds $\rightarrow$ Write the proportion. $\dfrac{5}{1} = \dfrac{}{x}$

Solve for x.

13. 2 pounds for $3; 10 pounds for a dollars $\rightarrow$ Write the proportion. $\dfrac{}{} = \dfrac{}{}$

Solve for a.