

LESSON 6.2

Practice

For use with pages 364-370

Copy and complete the statement.

1. If $\frac{6}{x} = \frac{5}{y}$, then $\frac{6}{5} = \frac{x}{y}$

2. If $\frac{x}{12} = \frac{y}{26}$, then $\frac{x}{y} = \frac{12}{26}$

3. If $\frac{x}{4} = \frac{7}{y}$, then $\frac{x+4}{4} = \frac{7+y}{y}$

4. If $\frac{9}{2} = \frac{x}{y}$, then $\frac{11}{2} = \frac{9+y}{y}$

Decide whether the statement is true or false.

5. If $\frac{x}{y} = \frac{8}{3}$, then $\frac{y}{x} = \frac{3}{8}$. **True**
 $3x = 8y$ $3x = 8y$

6. If $\frac{x}{y} = \frac{8}{3}$, then $\frac{3}{x} = \frac{y}{8}$. **False**
 $xy = 3(8)$

7. If $\frac{x}{y} = \frac{8}{3}$, then $\frac{x}{8} = \frac{3}{y}$. **False**
 $xy = 8(3)$

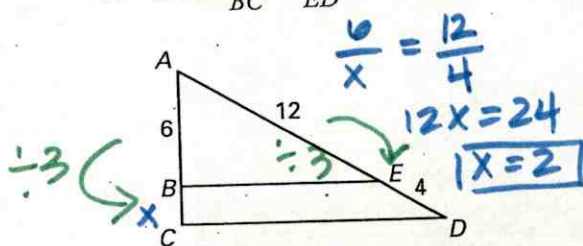
8. If $\frac{x}{y} = \frac{8}{3}$, then $\frac{x}{8} = \frac{y}{3}$. **True**
 $3x = 8y$

9. If $\frac{x}{y} = \frac{8}{3}$, then $\frac{x+8}{8} = \frac{y+3}{3}$. **True**
 $3(x+8) = 8(y+3)$
 $3x+24 = 8y+24$
 $-24 \quad -24$
 $3x = 8y$

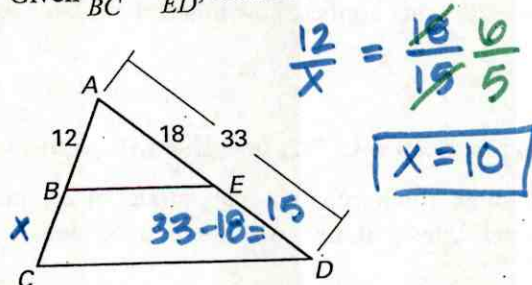
10. If $\frac{x}{y} = \frac{8}{3}$, then $\frac{x+2y}{y} = \frac{14}{3}$. **True**
 $3(x+2y) = 14y$
 $3x+6y = 14y$
 $-6y \quad -6y$
 $3x = 8y$

Use the diagram and the given information to find the unknown length.

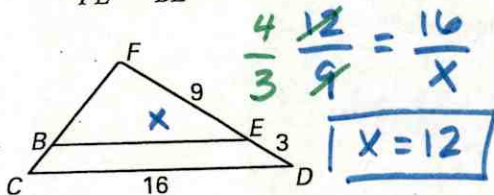
11. Given $\frac{AB}{BC} = \frac{AE}{ED}$, find BC.



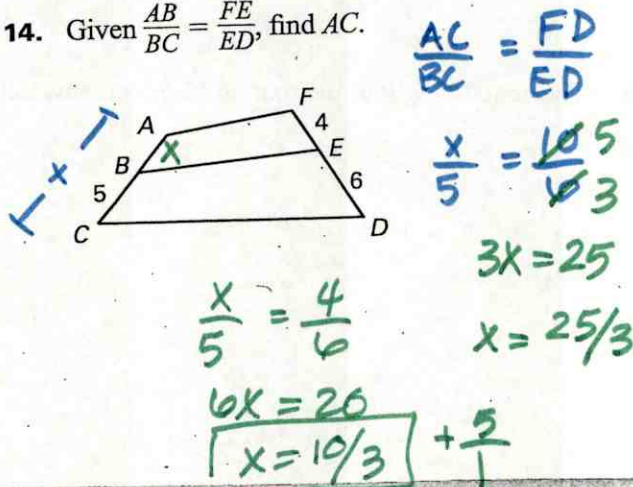
12. Given $\frac{AB}{BC} = \frac{AE}{ED}$, find BC.



13. Given $\frac{FD}{FE} = \frac{CD}{BE}$, find BE.



14. Given $\frac{AB}{BC} = \frac{FE}{ED}$, find AC.



LESSON
6.2**Practice** *continued*
For use with pages 364–370

15. **Multiple Choice** If m , n , p , and q are four different numbers, and the proportion

$$\frac{m}{n} = \frac{p}{q}$$

is true, which of the following is false?

- A. $mq = pn$ B. $m = p$ and $n = q$ C. $\frac{n+m}{m} = \frac{q+p}{p}$

16. **Error Analysis** Describe and correct the error made in the reasoning.

$$\text{If } \frac{a}{5} = \frac{b}{3}, \text{ then } \frac{5}{a} = \frac{b}{3}. \quad \times$$

17. **Map Scale** On a map, two neighboring towns are 2.4 inches apart. The actual straight line distance between the two towns is 36 miles. What is the scale of the map?

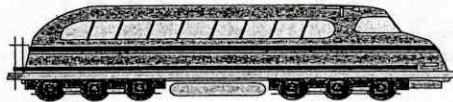
18. **Collinear Points** The points $(-3, -3)$, $(-1, 1)$, and $(2, y)$ are collinear.

$$\text{Find the value of } y \text{ by solving the proportion } \frac{1 - (-3)}{-1 - (-3)} = \frac{y - 1}{2 - (-1)}.$$

19. **Sales Tax** You plan on purchasing a new \$25,000 vehicle. Recently, a friend bought a \$22,500 vehicle and paid an additional \$1575 in sales tax. Assuming the same sales tax rate applies, how much should you expect to pay in sales tax?

In Exercises 20 and 21, use the following information.

Scale Model You purchase a scale model of a train. The model states that the scale is 1 inch : 5.4 feet.



20. If the model is 10 inches long, how long is the actual train?
21. The actual height of the train is 13.5 feet, how tall is the model?

LESSON
6.2**Practice** *continued*
For use with pages 364-370**In Exercises 22 and 23, use the following information.****Mexican Pesos** In November, 2005, the exchange rate of Mexican pesos to U.S. dollars was 10.77 to 1. While on vacation, you paid 205 pesos for a sombrero at a gift shop.

22. What was the price of the sombrero in U.S. dollars?

$$\frac{\text{Pesos}}{\text{US \$}} = \frac{10.77}{1}$$

$$\frac{10.77}{\$1} = \frac{205}{x}$$

$$x = \$19.03$$

$$10.77x = 205$$

23. If the exchange rate were 9.24 Mexican pesos to 1 U.S. dollar, what would have been the cost in U.S. dollars?

$$\frac{\text{Pesos}}{\text{US \$}} = \frac{9.24}{\$1}$$

$$\frac{9.24}{\$1} = \frac{205}{x}$$

$$x = \$22.19$$

$$9.24x = 205$$

In Exercises 24 and 25, use the following information.**Canadian Dollars** In November, 2005, the exchange rate of Canadian dollars to U.S. dollars was 1 to 0.85. A Canadian citizen paid \$12.28 in U.S. dollars for lunch while visiting New York City.

24. What was the price of the lunch in Canadian dollars?

$$\frac{\text{Canadian}}{\text{US \$}} = \frac{1}{\$0.85}$$

$$\frac{1}{.85} = \frac{x}{\$12.28}$$

$$.85x = 12.28$$

$$x = \$14.45$$

25. If the exchange rate were 1.28 Canadian dollars to 1 U.S. dollar, what would have the cost been in Canadian dollars?

$$\frac{\text{Canadian}}{\text{US \$}} = \frac{1.28}{\$1}$$

$$\frac{1.28}{1} = \frac{x}{\$12.28}$$

$$x = 1.28(12.28)$$

$$x = \$15.72$$