Name _____ Date _____

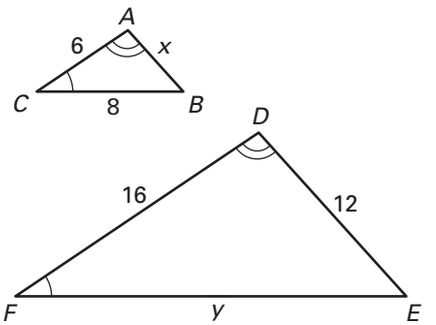
LESSON 6.4

LESSON 6.4

Practice B

For use with pages 381–387

Use the diagram to complete the statement.



1. $\triangle ABC \sim$?

2. $\frac{AB}{?} = \frac{?}{EF} = \frac{CA}{?}$

3. $\angle B \cong$?

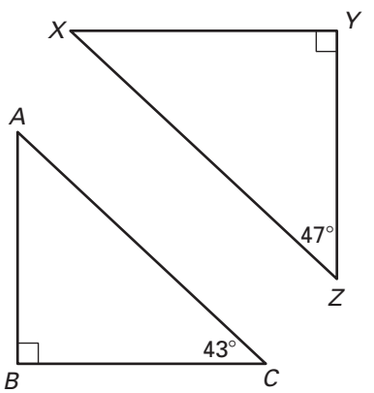
4. $\frac{?}{12} = \frac{8}{?}$

5. $x =$?

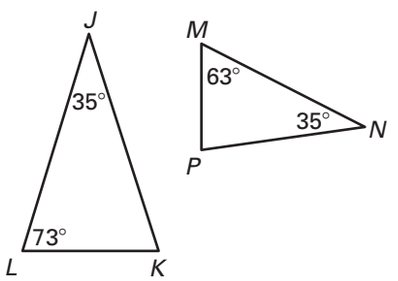
6. $y =$?

Determine whether the triangles are similar. If they are, write a similarity statement.

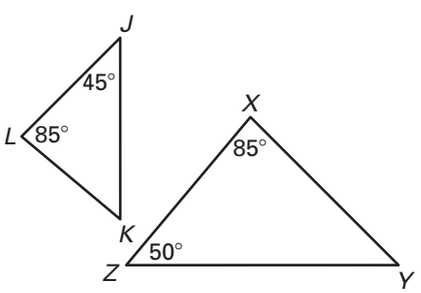
7.



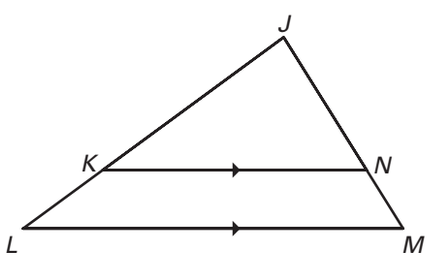
8.



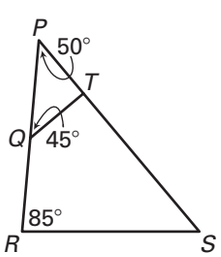
9.



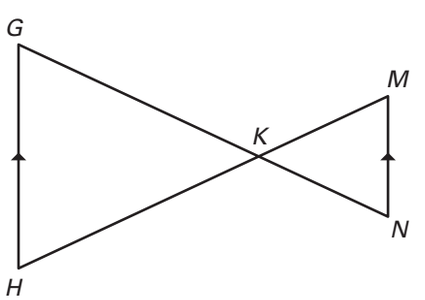
10.



11.



12.



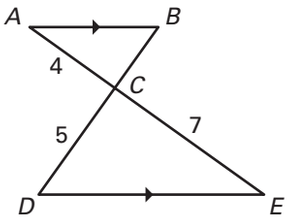
Name _____ Date _____

LESSON 6.4

Practice B *continued*

For use with pages 381–387

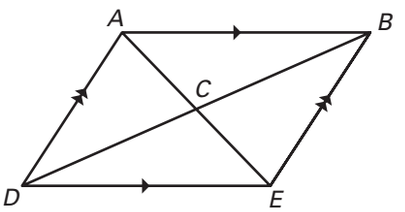
13. **Multiple Choice** In the diagram at the right, find the length of $\overline{BC}$.



A. $\frac{28}{5}$ **B.** 6

C. 3 **D.** $\frac{20}{7}$

In Exercises 14–17, use the diagram at the right.



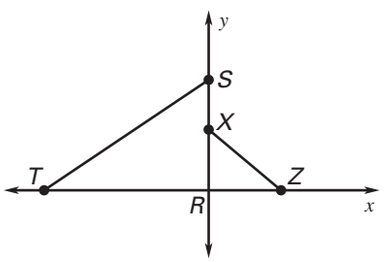
14. List three pairs of congruent angles.

15. Name two pairs of similar triangles and write a similarity statement for each.

16. Is $\triangle ACD \sim \triangle BCE$?

17. Is $\triangle AED \cong \triangle EAB$?

In Exercises 18–21, use the diagram at the right. Find the coordinates of point *Z* so that $\triangle RST \sim \triangle RXZ$.



18. $R(0, 0)$, $S(0, 4)$, $T(-8, 0)$, $X(0, 2)$, $Z(x, y)$

19. $R(0, 0)$, $S(0, 6)$, $T(-6, 0)$, $X(0, 2)$, $Z(x, y)$

20. $R(0, 0)$, $S(0, 10)$, $T(-20, 0)$, $X(0, 6)$, $Z(x, y)$

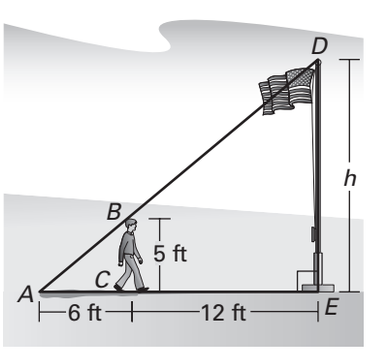
21. $R(0, 0)$, $S(0, 7)$, $T(-9, 0)$, $X(0, 4)$, $Z(x, y)$

22. **Multiple Choice** Triangles ABC and DEF are right triangles that are similar. $\overline{AB}$ and $\overline{BC}$ are the legs of the first triangle. $\overline{DE}$ and $\overline{EF}$ are the legs of the second triangle. Which of the following is false?

A. $\angle A \cong \angle D$ **B.** $AC = DF$ **C.** $\frac{AC}{DF} = \frac{AB}{DE}$

In Exercises 23–25, use the following information.

Flag Pole In order to estimate the height h of a flag pole, a 5 foot tall male student stands so that the tip of his shadow coincides with the tip of the flag pole's shadow. This scenario results in two similar triangles as shown in the diagram.



23. Why are the two overlapping triangles similar?

24. Using the similar triangles, write a proportion that models the situation.

25. What is the height h (in feet) of the flag pole?