Name_____ Date _____
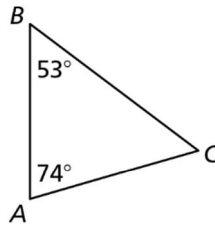
1. Rectangle A is similar to rectangle B. Rectangle A has side lengths of 8 and 20. Rectangle B has a side length of 10. What are the possible values for the length of the other side of rectangle B? Select all that apply.

   Ⓐ 4

   Ⓑ 16

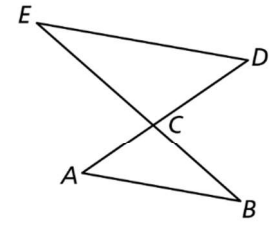   Ⓒ 25

   Ⓓ 40

2. Which of the following statements is false?

   Ⓐ $AC < BC$

   Ⓑ $AB < AC + BC$

   Ⓒ $BC > AB$

   Ⓓ $\triangle ABC$ is scalene.

3. In the diagram, $\dfrac{AC}{DC} = \dfrac{BC}{EC}$. Which of the following statements is false?

   Ⓐ $\overline{AB} \parallel \overline{DE}$

   Ⓑ $\triangle ABC \sim \triangle DEC$

   Ⓒ $\angle A \cong \angle D$

   Ⓓ $\angle ABC \cong \angle EDC$

4. In $\square PQRS$, the ratio of QR to RS is 3 to 2. The perimeter of $\square PQRS$ is 70 units. What is PS?

   units

5. A tree casts a shadow that is 90 feet long. A person standing nearby who is 5 feet 6 inches casts a shadow that is 72 inches long. How tall is the tree?

   feet

6. What are the coordinates of the circumcenter of the triangle with vertices $(-2, -1)$, $(-6, -1)$, and $(-6, 11)$.

_____

<div style="border:1px solid black; display:inline-block;">Chapter 8</div> **Test Prep** (continued)
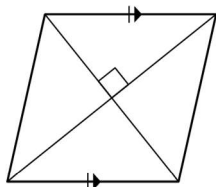
7. Which figure is stable?

Ⓐ

Ⓑ

Ⓒ

Ⓓ

8. Which name can be used to classify the quadrilateral? Select all that apply.

Ⓐ parallelogram

Ⓑ rectangle

Ⓒ rhombus

Ⓓ trapezoid

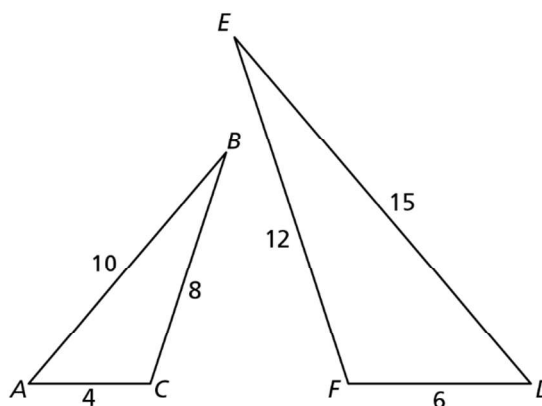**9.** Which geometric figure illustrates the graph of $2x + 3 \leq 7$?

Ⓐ point

Ⓑ line

Ⓒ line segment

Ⓓ ray

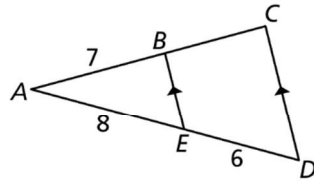**10.** What is the scale factor from $\triangle ABC$ to $\triangle DEF$?

Chapter 8

Test Prep (continued)

11. What is AC?

Ⓐ $5\frac{1}{4}$

Ⓑ 12

Ⓒ $12\frac{1}{4}$

Ⓓ $16\frac{1}{3}$

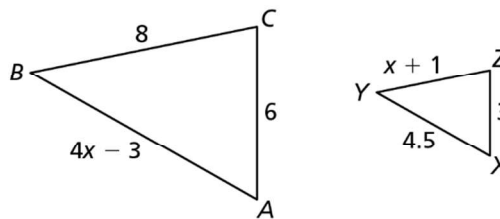**12.** What is the value of z?

Ⓐ 1.8

Ⓑ 4

Ⓒ 5

Ⓓ 7.2
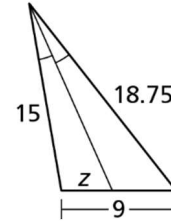
13. Figure X is similar to figure Y. Figure X has a perimeter of 22 inches and an area of 80 square inches. Figure Y has a perimeter of 55 inches. What is the area of figure Y?

Ⓐ 12.8 square inches

Ⓑ 32 square inches

Ⓒ 200 square inches

Ⓓ 500 square inches

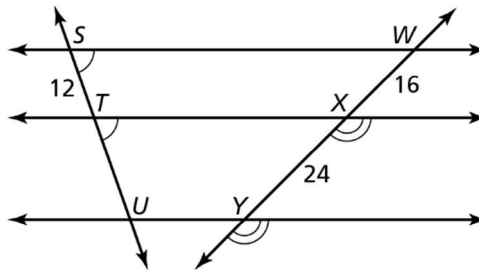**14.** What value of x makes $\triangle ABC \sim \triangle XYZ$?

Ⓐ 3

Ⓑ 4

Ⓒ 9

Ⓓ 10

15. What is TU?

Ⓐ 8

Ⓑ 18

Ⓒ 20

Ⓓ 32

16. A reflection in a line maps point $B(3, -1)$ to point $B'(11, -1)$. What is the equation of the line of reflection?

_____

17. Which of the following quadrilaterals does not have perpendicular diagonals?

   Ⓐ rectangle

   Ⓑ rhombus

   Ⓒ square

   Ⓓ kite

18. Which of the following statements illustrates the Transitive Property of Equality?

   Ⓐ If $a = b$ and $b = c$, then $a = c$.

   Ⓑ If $x = y$, then $y = x$.

   Ⓒ $a = a$

   Ⓓ If $AB = CD$, then $CD = AB$.

19. In a triangle, $m\angle P = 47°$ and $m\angle Q = 103°$. In another triangle, $m\angle S = (x - 7)°$ and $m\angle T = (y + 4)°$. For which of the following values of x and y are the two triangles similar?

   Ⓐ $x = 37, y = 110$

   Ⓑ $x = 110, y = 99$

   Ⓒ $x = 54, y = 26$

   Ⓓ $x = 47, y = 103$

20. The shortest side of a triangle similar to $\triangle FGH$ is 10 units long. What is the sum of the other side lengths of the triangle?

   Ⓐ 12.5

   Ⓑ 15

   Ⓒ 20

   Ⓓ 27.5
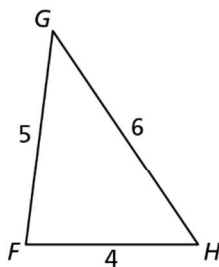
21. A carpenter cuts a piece of wood for a project. The piece of wood can be represented in the coordinate plane by a triangle with vertices $L(5, -1)$, $M(9, 7)$, and $N(1, 3)$. What type of triangle is $\triangle LMN$?

   Ⓐ equilateral

   Ⓑ isosceles

   Ⓒ scalene

   Ⓓ right