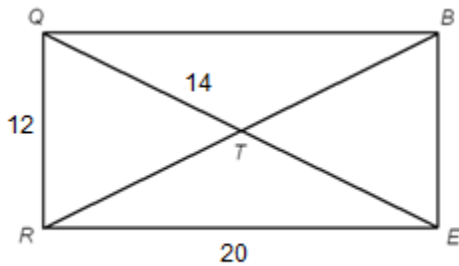


Name _____ Date _____ Period _____

DIRECTIONS: For #1-3, fill in the blanks with **always**, **sometimes**, or **never** to make the statements true.

1. Two squares are _____ similar.
2. Two congruent parallelograms are _____ similar.
3. An equilateral triangle and an isosceles triangle are _____ similar.

DIRECTIONS: For #4-10, write each ratio in its simplest form. Use the following diagram for #4-8.



Given: Quadrilateral $QBRE$ is a rectangle

- | | |
|--|--|
| <p>4. $QB : BE$ _____</p> <p>5. $ET : EQ$ _____</p> <p>6. $ER : RQ$ _____</p> | <p>7. $ER : RQ : QB$ _____</p> <p>8. $m\angle QTB : m\angle RTE$ _____</p> |
| <p>9. 15 inches : 30 inches _____</p> | <p>10. 6 mm : 5 cm _____</p> |

DIRECTIONS: For #11, accurately complete the definition of similar polygons.

11. The definition of similar polygons has two parts. They are
- a) corresponding angles are _____ AND
 - b) corresponding sides are _____ .

DIRECTIONS: For #12-15, solve for x . Show work.

12. $\frac{4x}{7} = \frac{24}{3}$ $x =$ _____

13. $\frac{x-9}{6} = \frac{x}{4}$ $x =$ _____

14. $\frac{4x-3}{3x+1} = \frac{6}{5}$ $x =$ _____

15. $\frac{x+1}{x-4} = \frac{x+3}{x-6}$ $x =$ _____

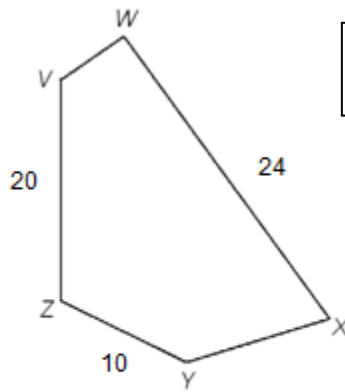
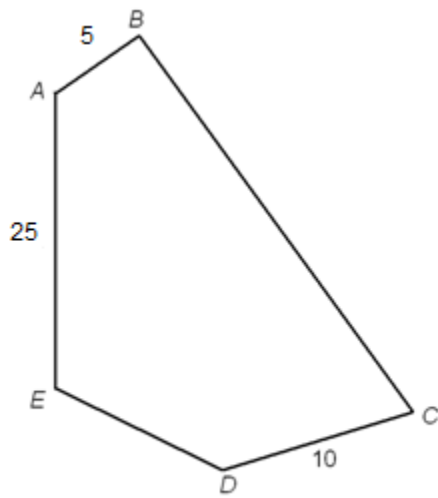
DIRECTIONS: For #16-18, solve the following problems. Write your answer in the provided blanks. Show all work.

16. The angles of a triangle are in a ratio of 3 : 4 : 8 . What is the measure of each angle?

17. The measures of two consecutive angles of a parallelogram are in the ratio of 17 : 3.
Find the measure of each angle.

18. The angles of a pentagon are in a ratio of 4 : 5 : 8 : 9 : 10 . What is the measure of each angle?

DIRECTIONS: Use the following diagram to answer/solve #19-23. Show work when solving for segment lengths.



Given:
 Pentagon $ABCDE \sim$ Pentagon $VWXYZ$

19. $m\angle D = m\angle$ _____

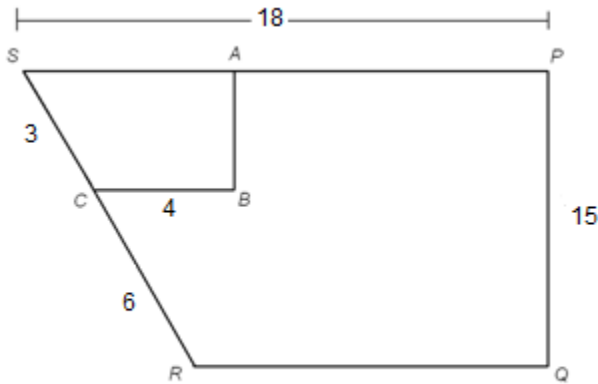
20. What is the scale factor of $ABCDE$ to $VWXYZ$? _____

21. $DE =$ _____

22. $XY =$ _____

23. $BC =$ _____

DIRECTIONS: Use the following diagram to answer/solve #24-27. Show work when solving for segment lengths.



Given:
 Quadrilateral $PQRS \sim$ Quadrilateral $ABCS$

24. $AB =$ _____

25. $SA =$ _____

26. $AP =$ _____

27. $RQ =$ _____