

Polygons and Quadrilaterals

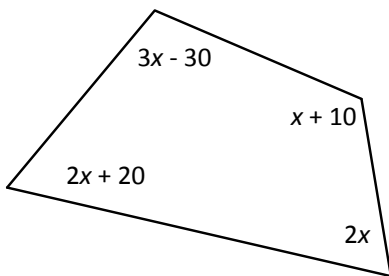
Directions: For questions 1 through 8, determine if the statement is true or false.

1. If a polygon is a trapezoid, then it is a quadrilateral.
2. If a polygon is a trapezoid, then it is a parallelogram.
3. If a polygon is a rectangle, then it is a quadrilateral.
4. If a polygon is a rectangle, then it is a parallelogram.
5. If a polygon is a rhombus, then it is a square.
6. If a polygon is a square, then it is a rhombus.
7. If a quadrilateral has four right angles, then it is a square.
8. If a quadrilateral has four right angles, then it is a rectangle.

Directions: For questions 9 through 16, complete each statement using always, sometimes or never.

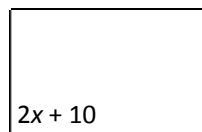
9. A square is _____ a rectangle.
10. A rectangle is _____ a square.
11. A rhombus is _____ a square.
12. A square is _____ a rhombus.
13. A trapezoid is _____ a parallelogram.
14. A trapezoid is _____ a quadrilateral.
15. A quadrilateral _____ has four sides.
16. A quadrilateral _____ has four right angles.

17. Find the value of x .



18. In rhombus $ABCD$, $AB = 3x$ and $BC = 2x + 6$. Find the length of each side of the rhombus.

19. Find the value of x in the rectangle.



20. Find the value of x and then classify the quadrilateral.

