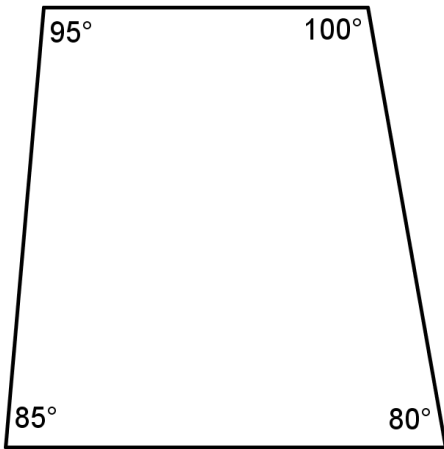
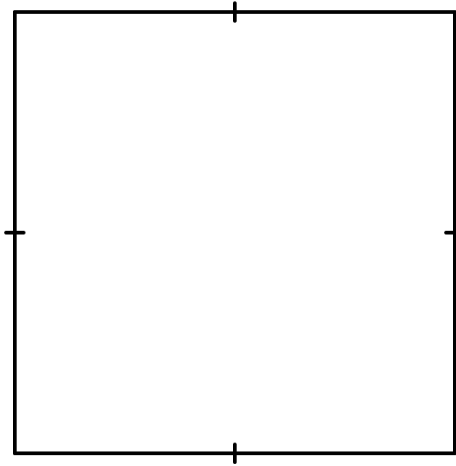


Determine the most specific name of the quadrilateral. Your choices are quadrilateral, parallelogram, rhombus, rectangle, square, trapezoid, isosceles trapezoid, and kite.

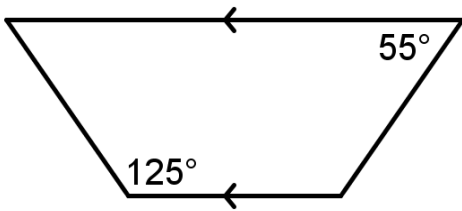
1.



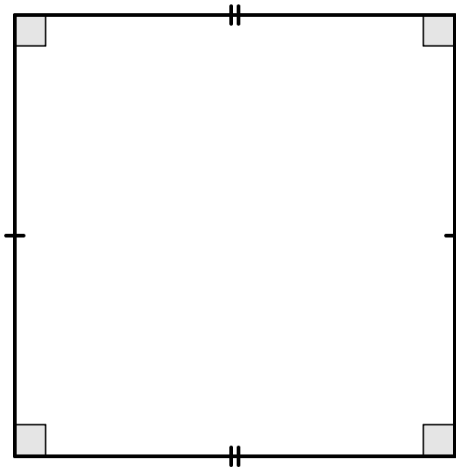
2.



3.

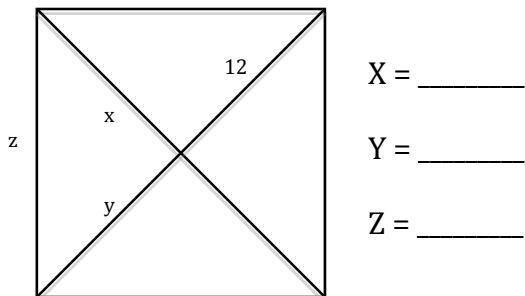


4.

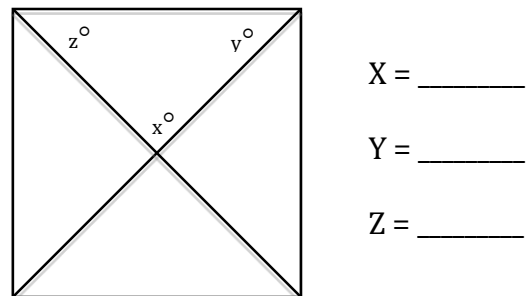


Find the value of each variable in the square.

5.

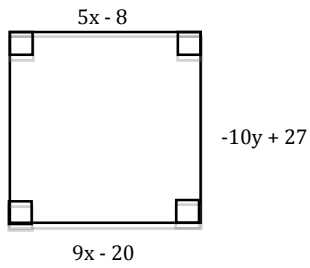


6.



Use the properties of the given quadrilateral to find the value of each the variable.

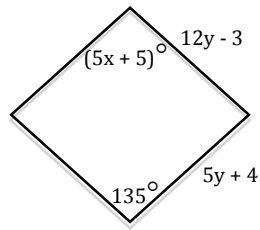
7. Below is a square.



X = _____

Y = _____

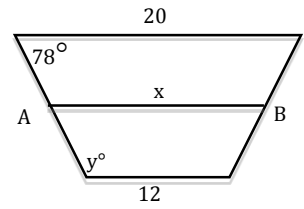
8. Below is a rhombus.



X = _____

Y = _____

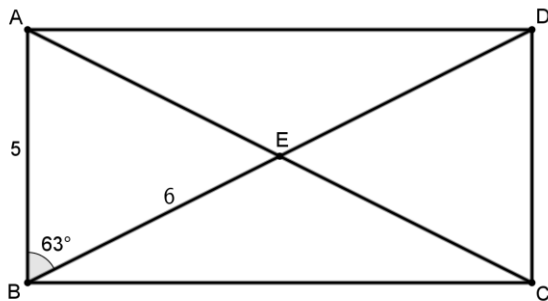
9. Below is a trapezoid.
 \overline{AB} is the midsegment.



X = _____

Y = _____

10. Below is a rectangle.

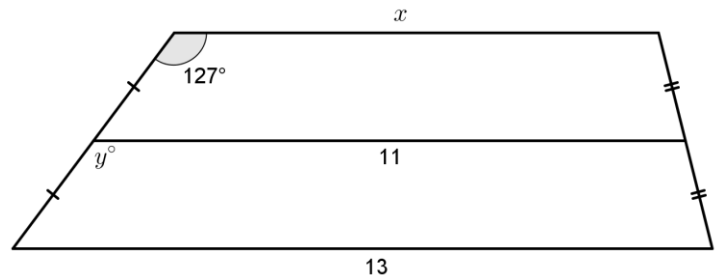


$m\angle CBE =$ _____ $m\angle BAE =$ _____

$m\angle DAE =$ _____ $m\angle BEA =$ _____

$AC =$ _____ $CD =$ _____

11. Below is a trapezoid

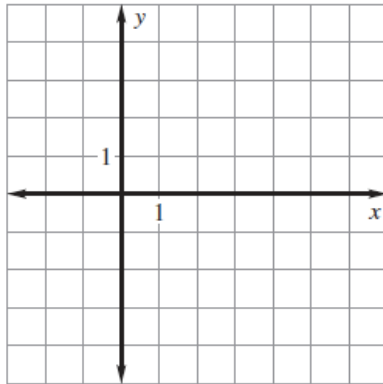


X = _____

Y = _____

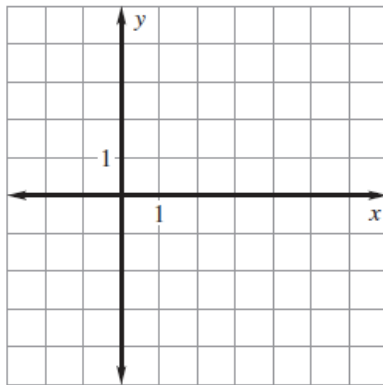
Use the given vertices to graph ABCD. Give the most specific classification for ABCD. Justify your answer by first calculating all necessary slopes, distances, and/or midpoints then explaining how those allow you to make your classification.

12. $A(2, 0), B(2, 3), C(4, 5), D(7, 5)$ Name _____



Work and Explanation:

13. $A(-1, 3), B(3, 1), C(2, -1), D(0, 0)$ Name _____



Work and Explanation:

Error Analysis:

14. Original Instructions: Classify the figure at the right giving the most specific name possible.

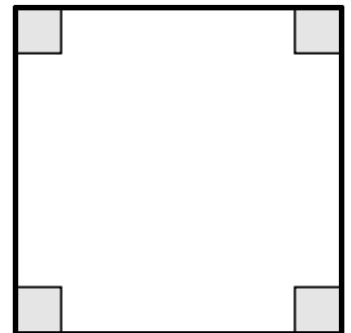
Sam's incorrect answer is show below. Explain why Sam's answer is incorrect, correctly identify the most specific name of the object, and explain the reasoning for your answer.

The object is a quadrilateral with 4 right angles, so it is a square.

Explain the error.

Identify the correct name of the quadrilateral.

Explain your reasoning.



Given coordinates A, B, and C, choose the coordinates of point D so that ABCD forms a parallelogram. Explain why your chosen point for D will make a parallelogram. *You may want graph paper* (If used attach it to this sheet when you turn it in)

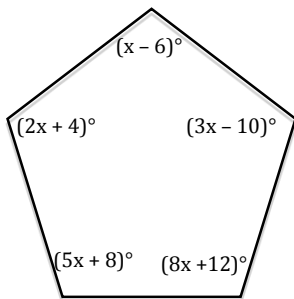
15. A(-3, 3), B(1, 2) C(2, -1) D(____, ____)Explain: _____

16. A(5, 3), B(1, 2) C(2, -1) D(____, ____)Explain: _____

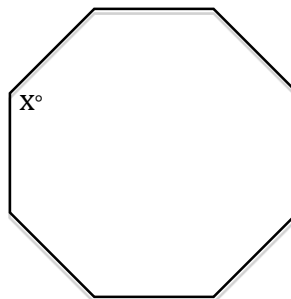
17. A(-3, 3), B(1, 2) C(4, 0) D(____, ____)Explain: _____

18. A(3, 3), B(-3, 2) C(2, -1)D(____, ____)Explain: _____

19. Find the value of x in the given pentagon



20. Find the value of x in the given regular octagon.



21. The measures of the exterior angles of a convex heptagon are 70° , $8x^\circ$, $5x^\circ$, 55° , $2x^\circ$, $6x^\circ$, and 46° . What is the measure of the **exterior angles in order from smallest to largest**?

Given the sum of the interior angles of a convex polygon, classify the polygon by the number of sides.

22. 2160°

23. 2700°

24. 1080°

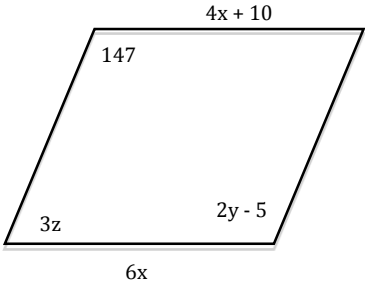
Given the measure of an interior angle of a regular polygon, find the number of sides.

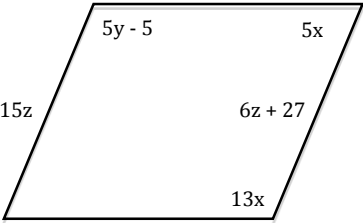
25. 150°

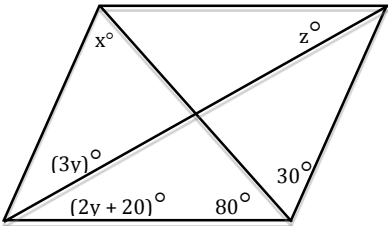
26. 120°

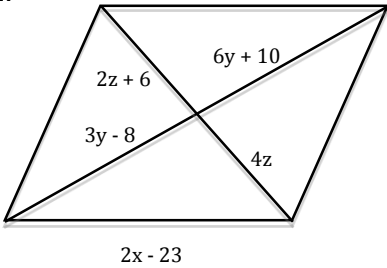
27. 60°

Find the value of each variable in the parallelogram.

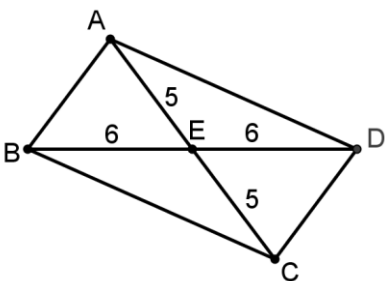
28.  $X = \underline{\hspace{2cm}}$
 $Y = \underline{\hspace{2cm}}$
 $Z = \underline{\hspace{2cm}}$

29.  $X = \underline{\hspace{2cm}}$
 $Y = \underline{\hspace{2cm}}$
 $Z = \underline{\hspace{2cm}}$

30.  $X = \underline{\hspace{2cm}}$
 $Y = \underline{\hspace{2cm}}$
 $Z = \underline{\hspace{2cm}}$

31.  $X = \underline{\hspace{2cm}}$
 $Y = \underline{\hspace{2cm}}$
 $Z = \underline{\hspace{2cm}}$

Is it possible to prove each quadrilateral is a parallelogram? Explain your answer.

32. 

33. 