Fifth Grade

Answer Key
Unit 6: Geometry

See PDF bookmarks
for navigation

Name _____

Problem of the Day

Lesson 1

Draw an example of a two-dimensional shape.

Lesson 2

Draw a quadrilateral with four right angles and write a name to describe the shape.

Sample answer:

square

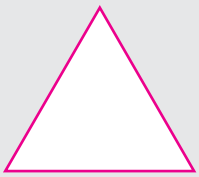
Lesson 3

List two properties of a quadrilateral.

Sample answer:
It has four sides and four corners.

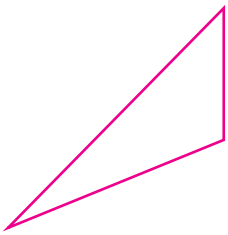
Lesson 4

Draw a triangle with three equal side lengths.



Lesson 5

Draw a triangle with three different interior angle measures.

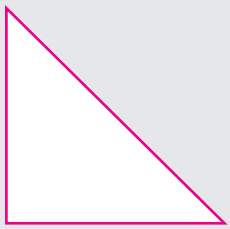


Name _____

Problem of the Day

Lesson 6

Draw a right triangle and describe its properties.



Sample answer:
This triangle has one right angle and two acute angles.

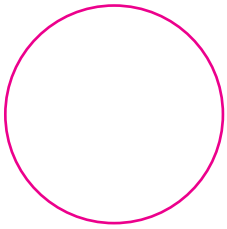
Lesson 8

Draw two different triangles. Explain how they are different.

Answers will vary.

Lesson 7

Draw a two-dimensional shape that is not a polygon.



Lesson 9

What is the name of the horizontal axis on a coordinate plane?

x-axis

Lesson 10

What is the point at which the two axes on a coordinate plane intersect?

origin

Name _____

Problem of the Day

Lesson 11

What is the *x*-coordinate of the ordered pair, (2, 3)?

2

Lesson 12

Which coordinate represents the value along the horizontal axis?

Sample answer: The first coordinate in an ordered pair.

Lesson 13

List some real-world situations that can be represented by points on a coordinate plane.

Sample answer: cities, maps

Lesson 14

Which coordinate comes second in an ordered pair?

y-coordinate

Lesson 15

What is the general name for a polygon with four vertices?

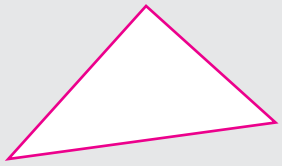
quadrilateral

Name _____

Problem of the Day

Lesson 16

Draw a triangle that is acute and isosceles.



Lesson 17

Draw any regular polygon and write two names for the shape.

Answers will vary.

Lesson 18

Draw three quadrilaterals that have at least one property that differentiates it from the others.

Answers will vary.

Lesson 19

Explain how to plot points on a coordinate plane so that they form a square.

Sample answer: Two sets of the coordinates must share the same x-coordinate and two sets of coordinates must share the same y coordinates.

Lesson 20

Draw three different polygons. Describe their similarities and differences.

Answers will vary.

Name _____

Pre-Assessment

1. Draw a square. Explain how you know it's a square.

Sample answer: It has four equal sides with four right angles.

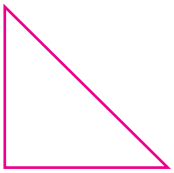
2. Describe the similarities and differences between a square and a rhombus.

Sample answer: A square has four right angles.

3. Draw a shape that has exactly one pair of parallel sides and classify the shape using two names.

Answers will vary.

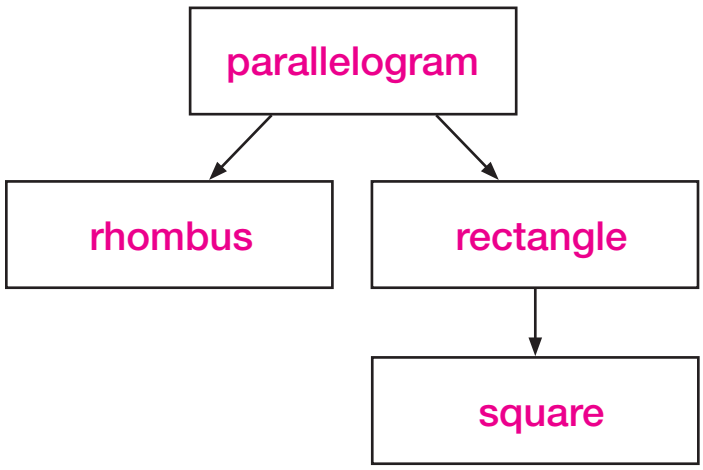
4. Draw a right triangle. Explain how you know it's a right triangle.



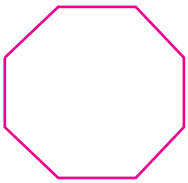
Sample answer: It has one angle that measures 90 degrees.

5. Write the terms below in the hierarchy.

parallelogram square
rectangle rhombus

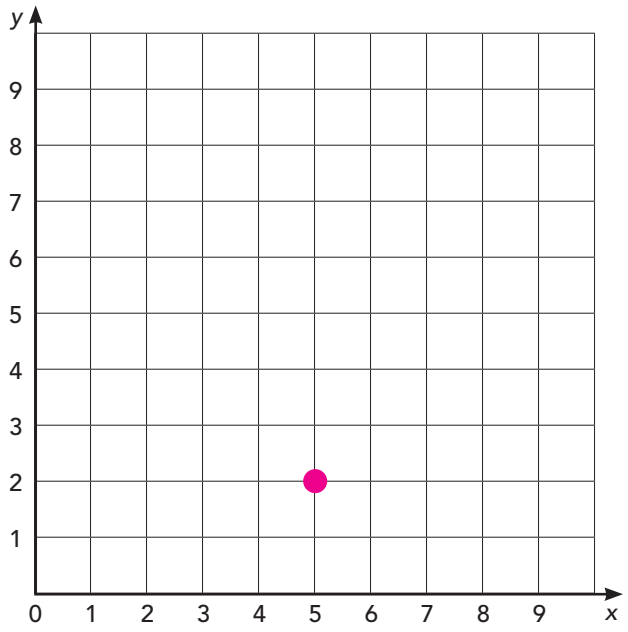


6. Draw an octagon. Explain how you know it's an octagon.

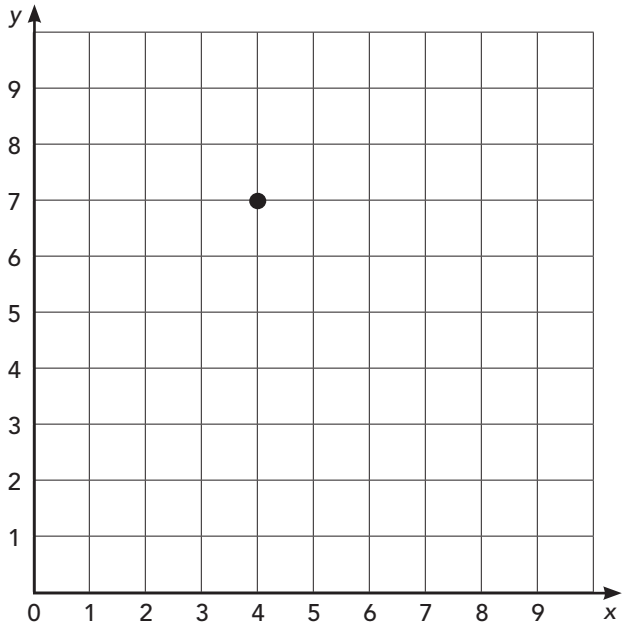


Sample answer: It has 8 sides and 8 corners.

7. Plot the point (5, 2) on the coordinate plane below.

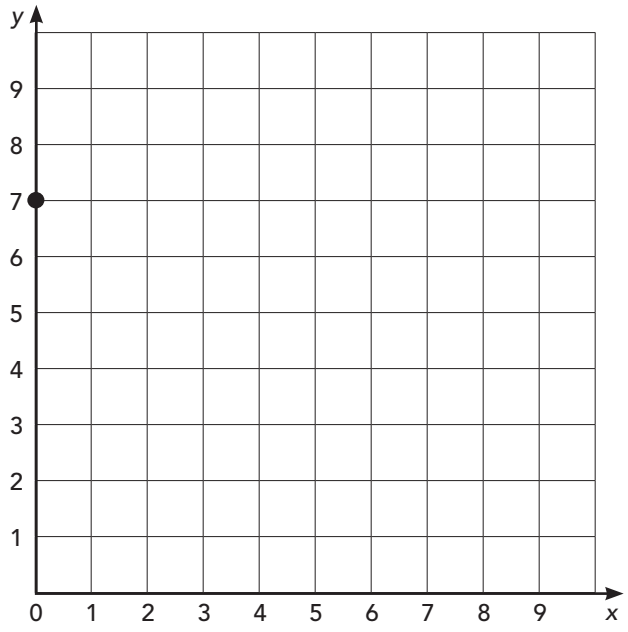


8. Describe the location of the point plotted below as related to the origin.



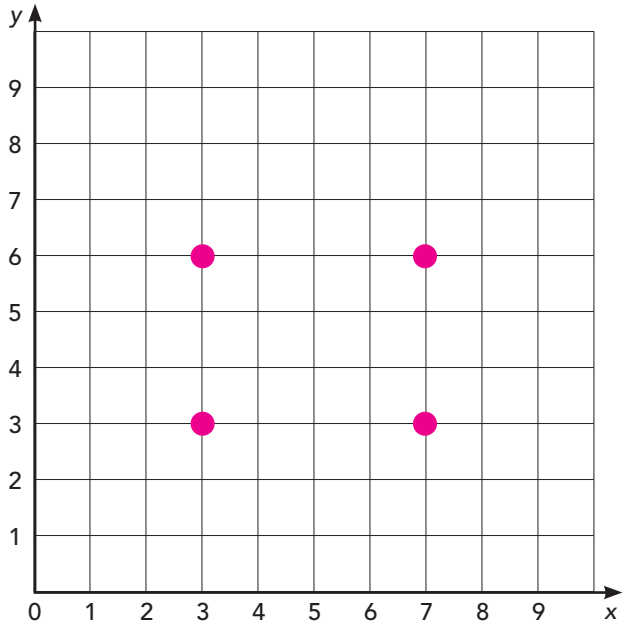
(4, 7)

9. Write the ordered pair represented by the point plotted below.



(0, 7)

10. A shape has vertices at the points, (3, 6), (3, 3), (7, 6), and (7,3). Plot the vertices and classify the shape using as many names as possible.



quadrilateral, parallelogram, rectangle

Name _____

Polygons Quiz

1. List the properties of a rhombus.

Sample answer: It has four equal sides, but no right angles.

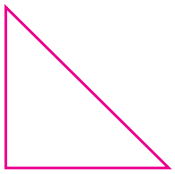
2. Describe the similarities and differences between a trapezoid and a parallelogram.

Sample answer: a parallelogram has 2 sets of parallel lines.

3. Draw any shape that has four sides of equal length and write a name for the shape.

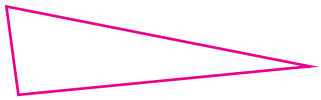
Answers will vary.

4. Draw a right triangle. Explain how you know it's a right triangle.

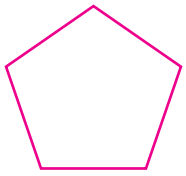


Sample answer: It has one angle that measures 90 degrees.

5. Draw an acute scalene triangle.



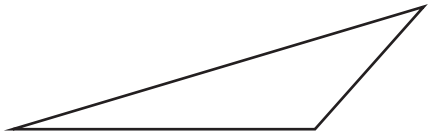
6. Draw a polygon that has five equal sides and classify the shape.



Sample answer: Pentagon

Name _____

7. Write two names to describe the triangle shown below.



Scalene triangle, acute triangle

8. Kim states that all rhombuses are also squares. Is she correct? Why or why not?

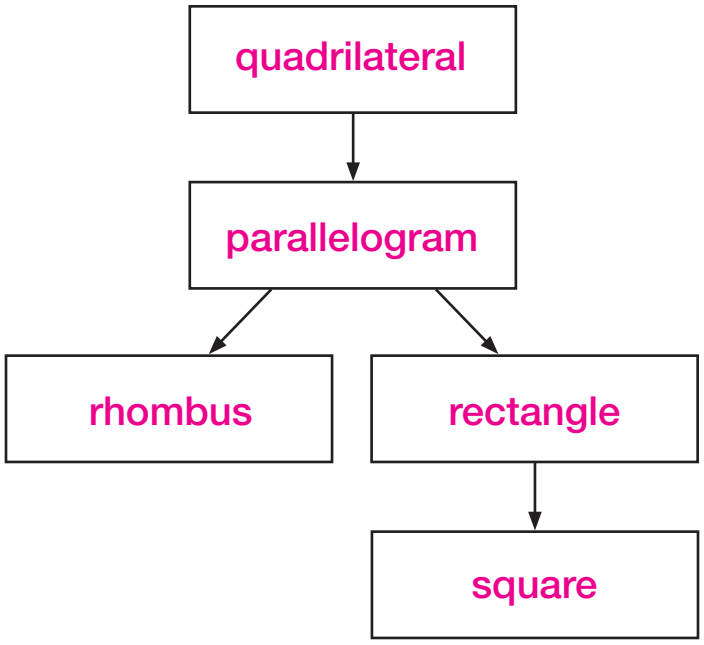
Sample answer: No. Rhombuses do not have 4 right angles like a square does.

9. Classify the shape shown below using as many names as possible.

quadrilateral, parallelogram, rectangle

10. Write the terms below in the hierarchy.

rhombus rectangle square quadrilateral parallelogram

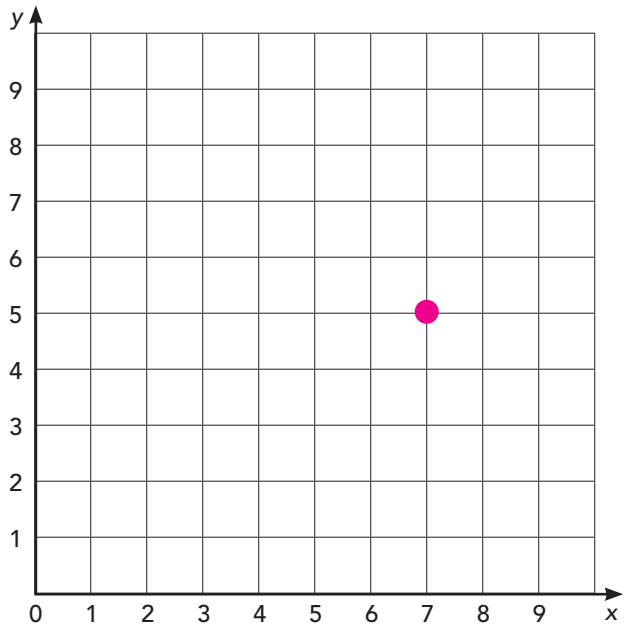


Name _____

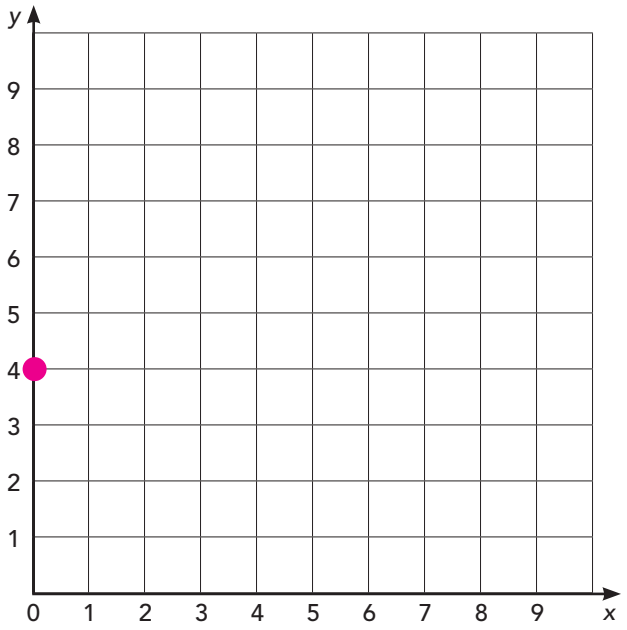
Coordinate Plane Quiz

Plot and label the points on the coordinate plane.

1. Point A: (7, 5)

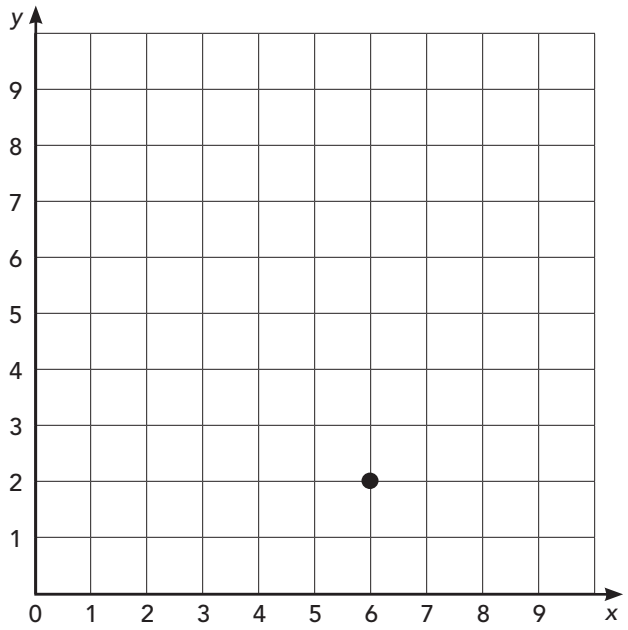


2. Point B: (0, 4)



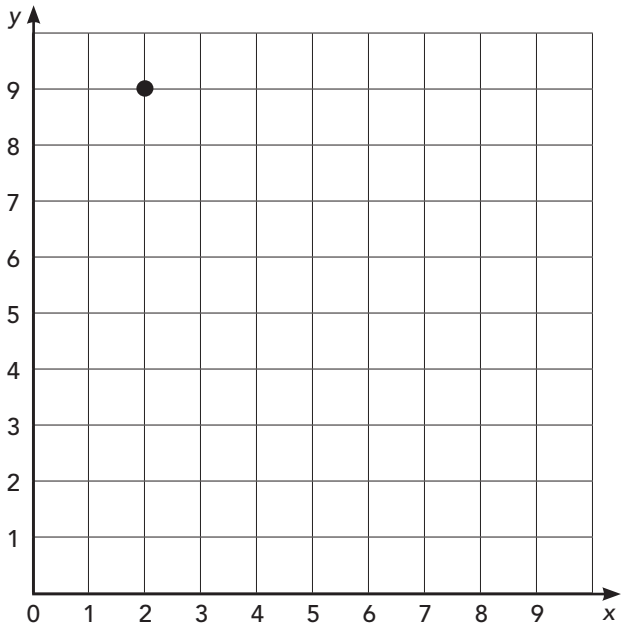
Describe the location of each point as related to the origin.

3.



(6, 2)

4.

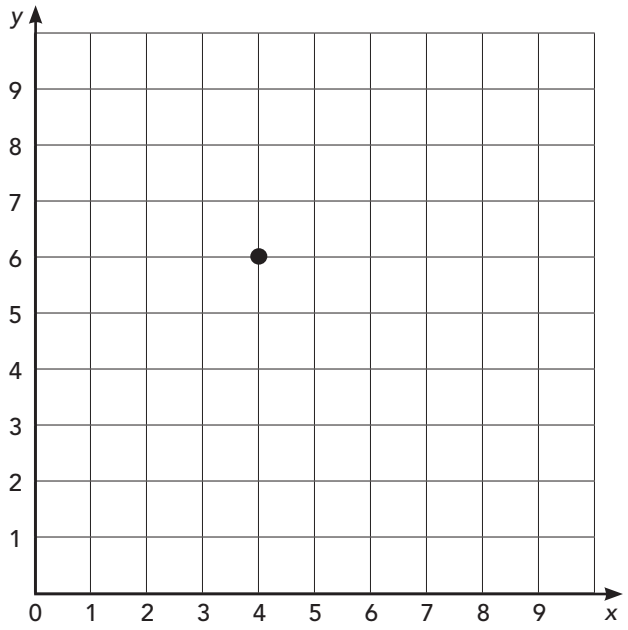


(2, 9)

Name _____

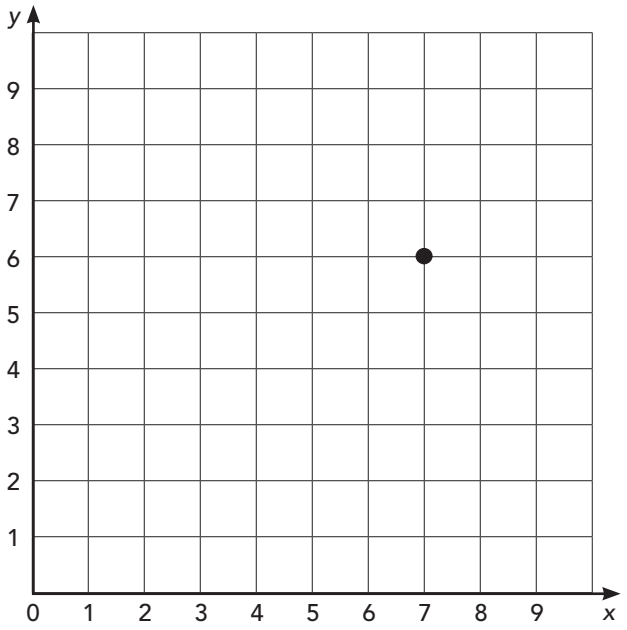
Write the ordered pair represented by the point shown on each coordinate plane.

5.



(4, 6)

6.

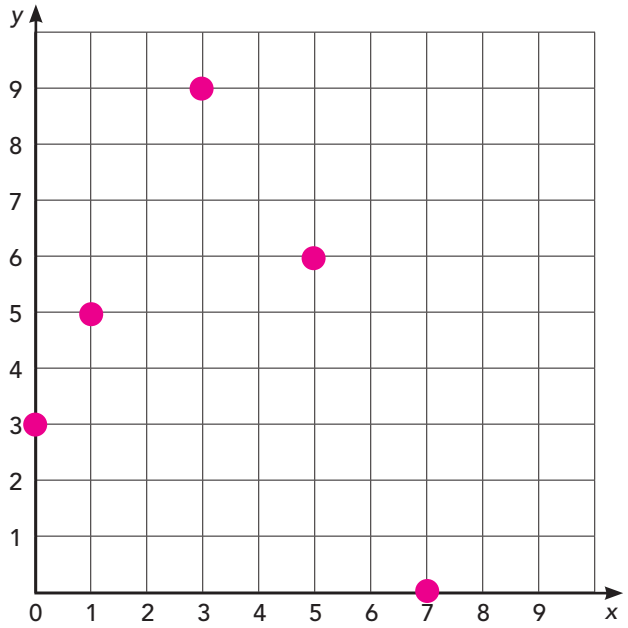


(7, 6)

Plot the ordered pairs represented by the input/output table.

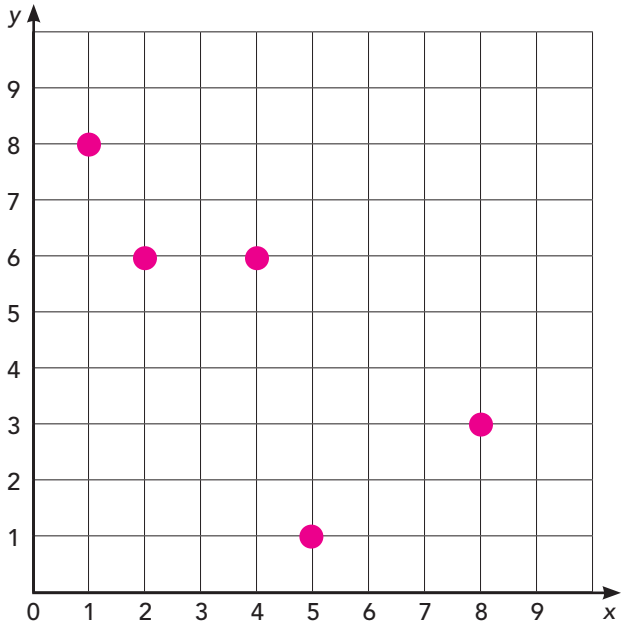
7.

Input, x	Output, y
0	3
1	5
3	9
5	6
7	1



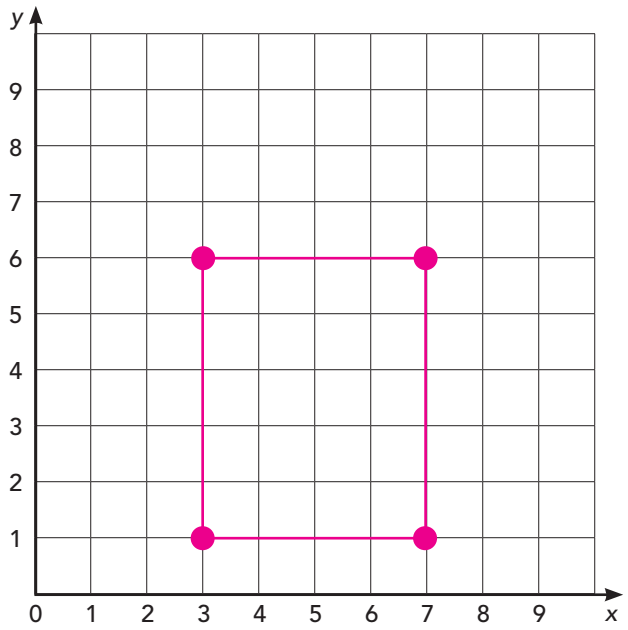
8.

Input, x	Output, y
1	8
2	6
4	6
5	1
8	3



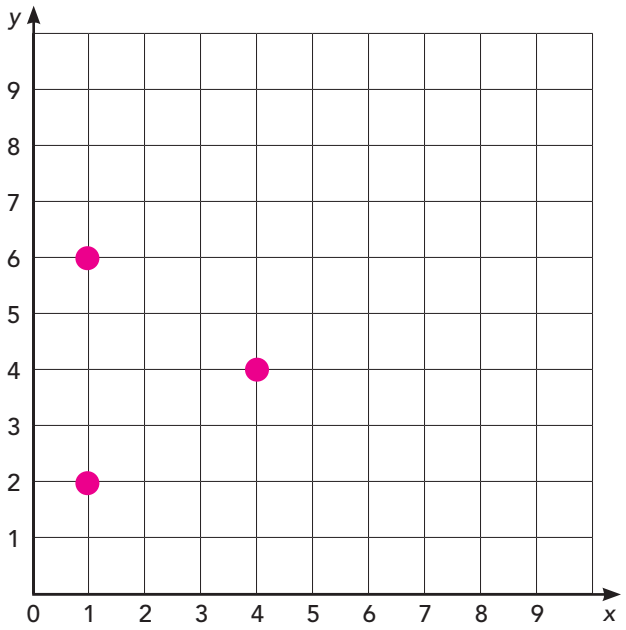
Name _____

9. Adam places posts at (3, 1), (3, 6), (7, 1), and (7, 6). He plans to enclose the area with a rope. Plot the points on the coordinate plane and find the area of the enclosed region. Each unit is 1 foot.



20 sq. units

10. The vertices of a triangular garden with an area of 3 square meters are plotted on a coordinate plane. Each unit represents 1 meter. Two of the vertices are represented by the ordered pairs (1, 6) and (4, 4). What is a possible ordered pair for the third vertex?



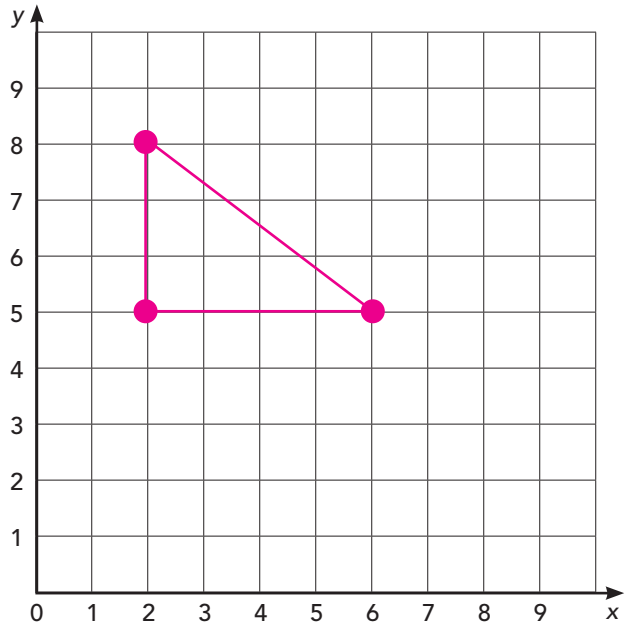
(1, 2)

Name _____

Graphing Polygons Quiz

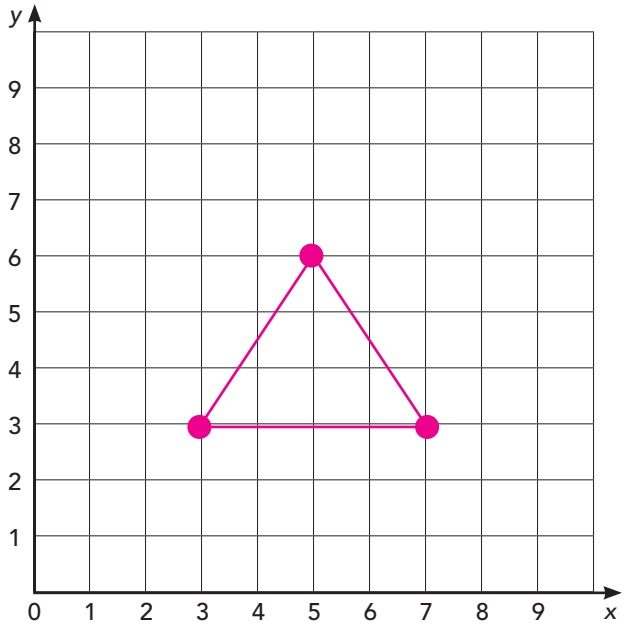
Plot the vertices and classify the shape using as many names as possible.

1. (2, 5), (2, 8), (6, 5)



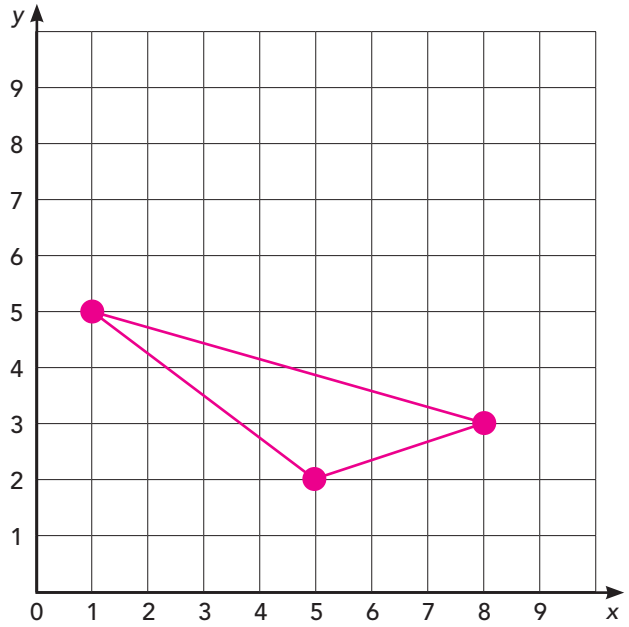
polygon, right triangle, acute triangle, scalene triangle

2. (3, 3), (5, 6), (7, 3)



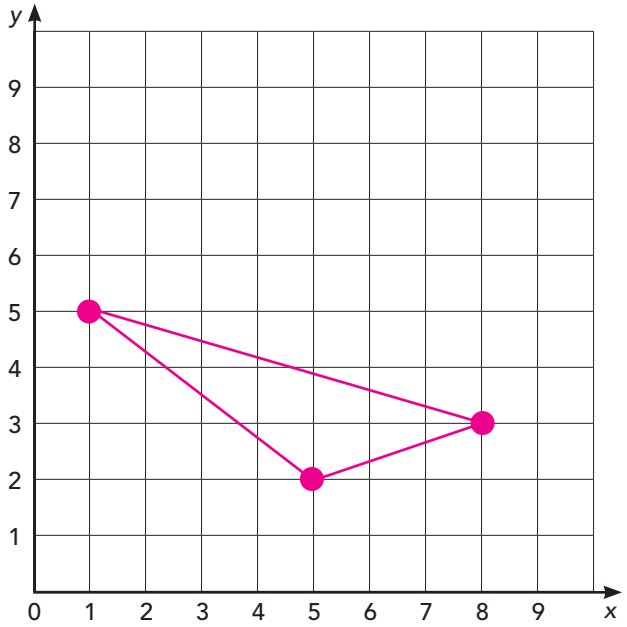
polygon, acute triangle, isosceles triangle

3. (1, 5), (8, 3), (5, 2)



polygon, acute triangle, scalene triangle

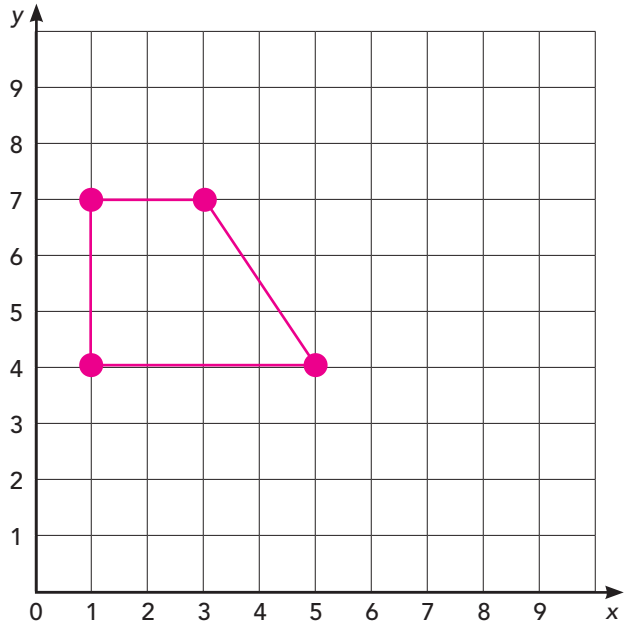
4. (1, 5), (8, 3), (5, 2)



polygon, acute triangle, scalene triangle

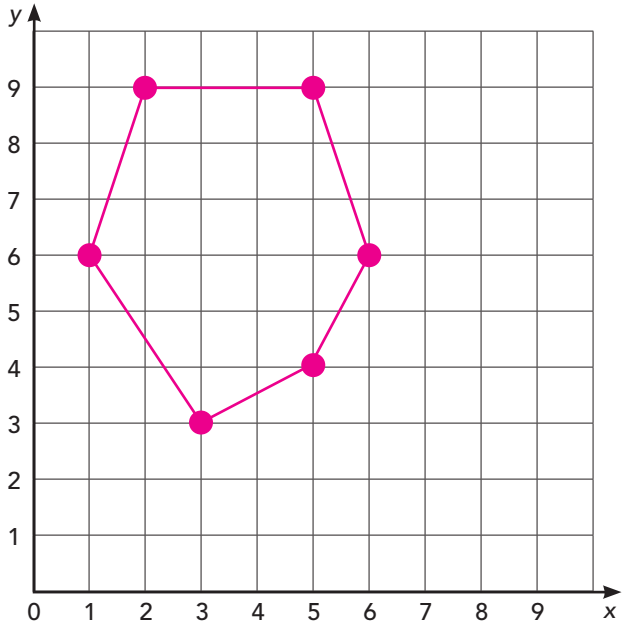
Name _____

5. (1, 4), (1, 7), (3, 7), (5, 4)



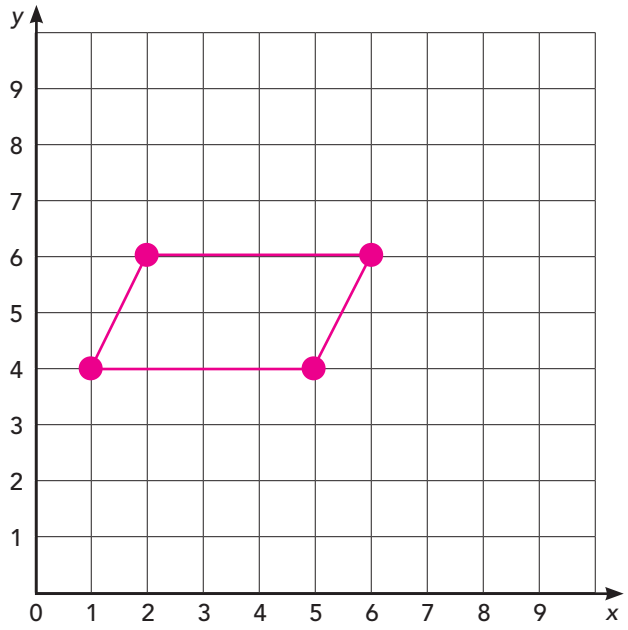
polygon, quadrilateral

6. (3, 3), (2, 9), (5, 9), (5, 4), (6, 6), (1, 6)



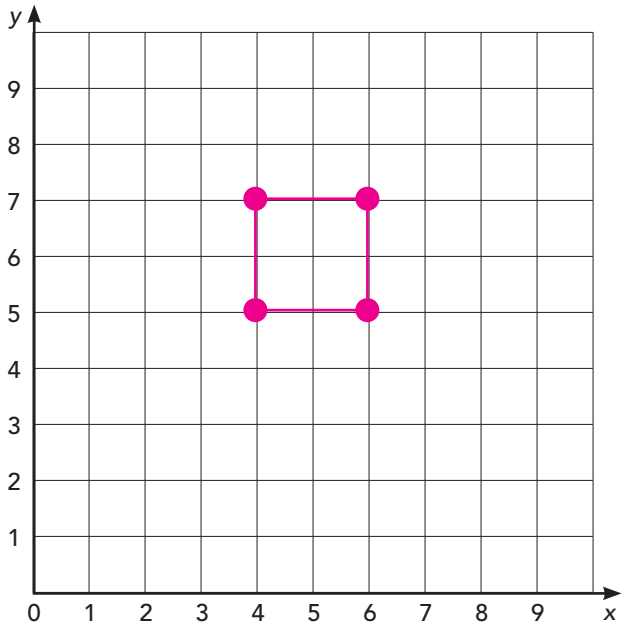
polygon

7. (6, 6), (2, 6), (5, 4), (1, 4)



polygon, quadrilateral, parallelogram

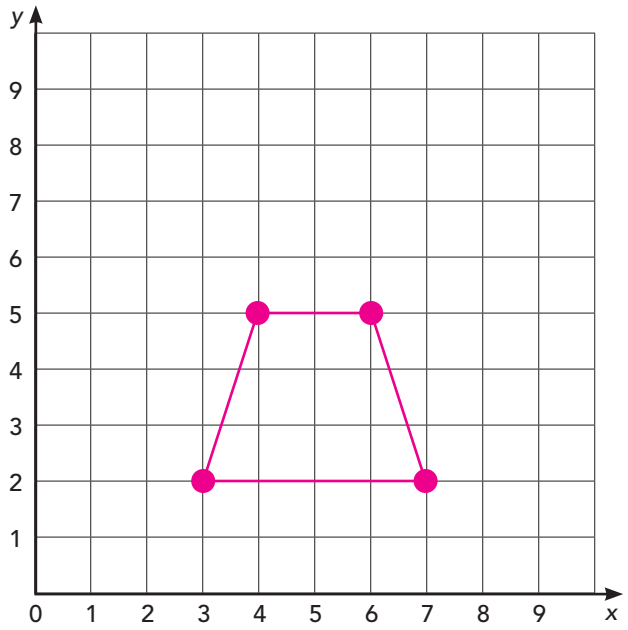
8. (4, 7), (6, 7), (6, 5), (4, 5)



polygon, quadrilateral, parallelogram, rectangle, square

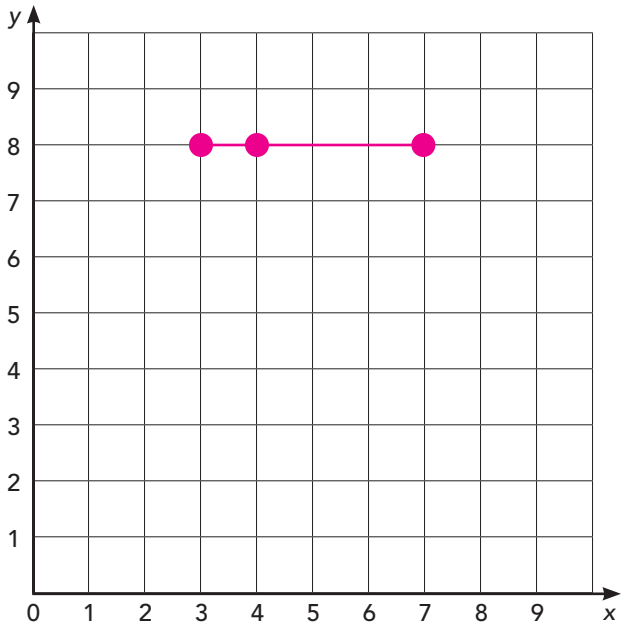
Name _____

9. (3, 2), (7, 2), (6, 5), (4, 5)



polygon, quadrilateral, trapezoid

10. (3, 8), (7, 8), (4, 8)



line

Name _____

Assessment

List the properties of each shape.

1. trapezoid

Sample answer: one set of parallel sides

2. parallelogram

Sample answer: two sets of parallel sides

3. isosceles triangle

Sample answer: two sides with equal lengths

Describe the similarities and differences between the pairs of shapes.

4. square and rectangle

Sample answer: Both have four right angles. A square has four sides of equal lengths.

5. square and parallelogram

Sample answer: Both have four sides and parallel lines. A square has four right angle and four equal sides.

6. rhombus and rectangle

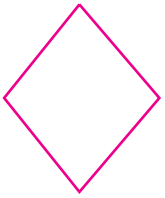
Sample answer: Both have four sides. A rectangle has four right angles.

Draw the polygon and write another name for the shape.

7. rectangle

Sample answer: quadrilateral

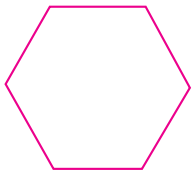
8. kite



rhombus

Draw a shape to represent the description and classify the shape using as many names as possible.

9. polygon with six equal sides



polygon, hexagon

10. polygon with four equal sides

Answers will vary.

11. polygon with two pairs of parallel sides

Answers will vary.

12. polygon with eight sides

Answers will vary.

Identify whether each statement is true or false. Explain your answers.

13. All squares are rectangles.

Sample answer: True. A square has four right angles and two sets of parallel sides.

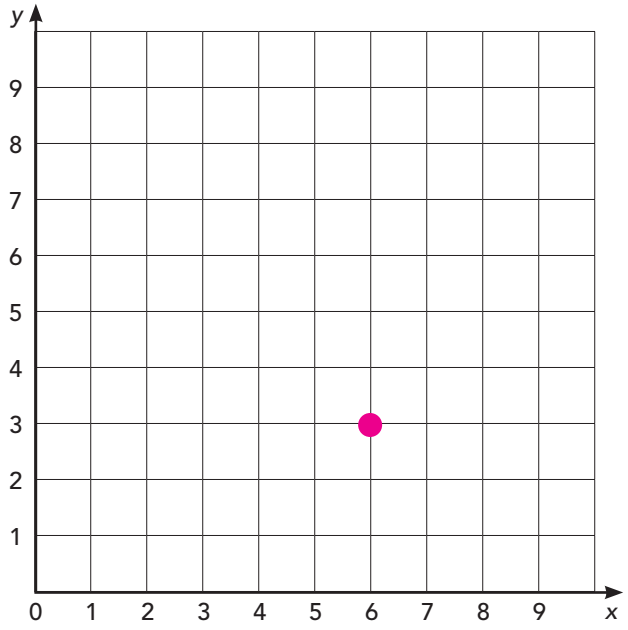
14. All trapezoids are parallelograms.

Sample answer: True. A trapezoid has four straight sides.

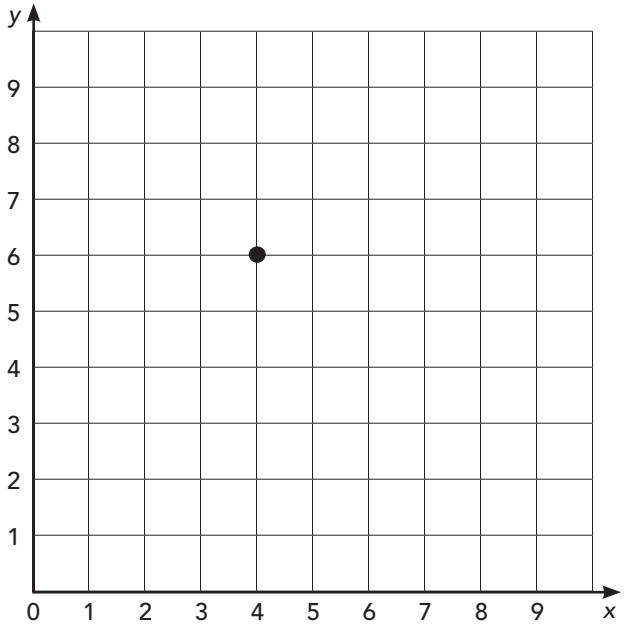
15. All parallelograms are rhombuses.

Sample answer: False. Squares and rectangles are also examples of parallelograms.

16. Plot the point, (6, 3), on the coordinate plane below.

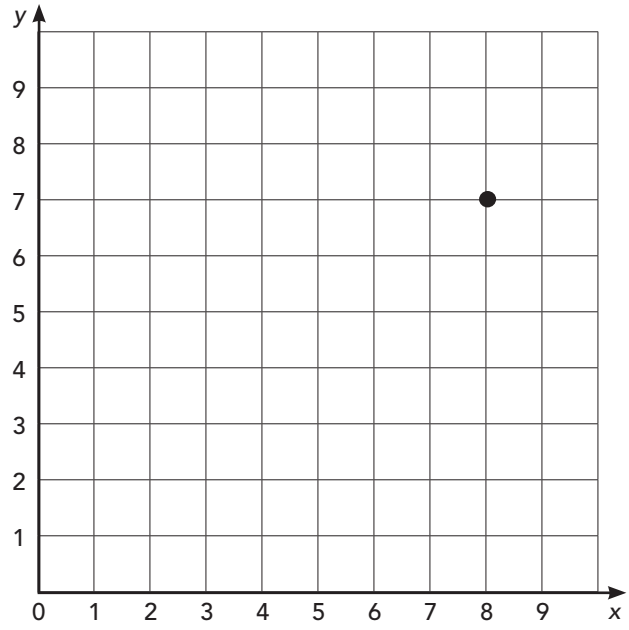


17. Describe the location of the point plotted below as related to the origin.



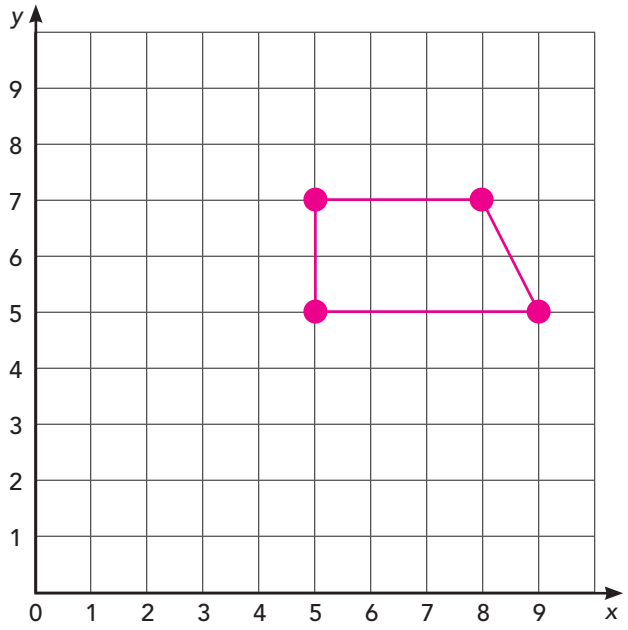
(4, 6)

18. Write the ordered pair represented by the point plotted below.



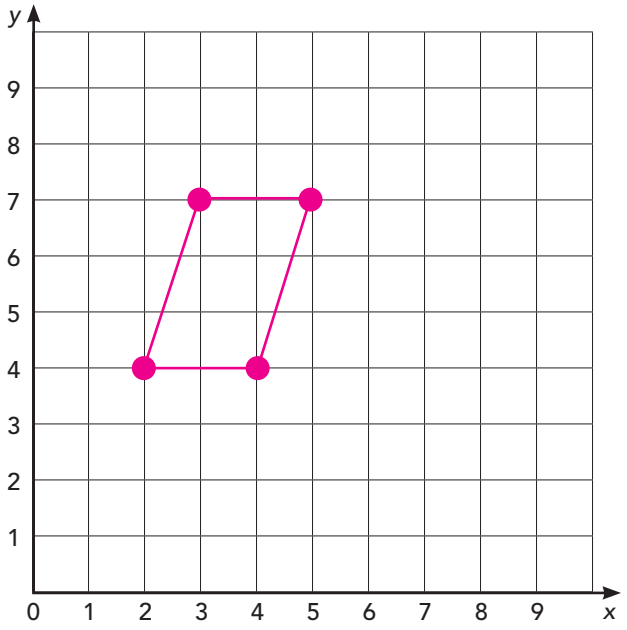
(8, 7)

19. A shape has vertices at the points, (8, 7), (5, 7), (5, 5), and (9, 5). Plot the vertices and classify the shape using as many names as possible.

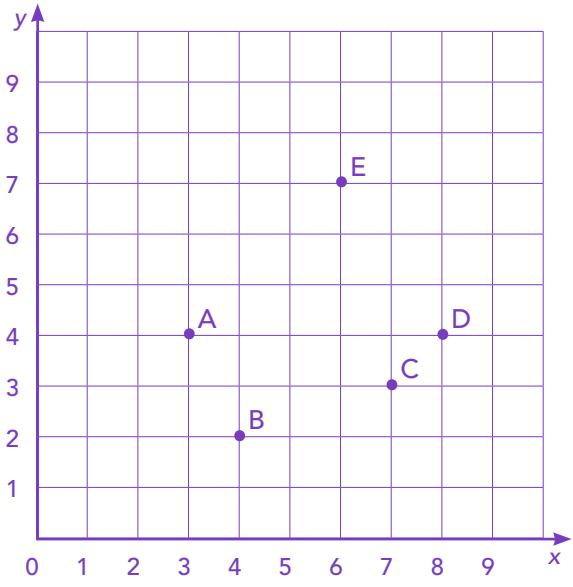


polygon, quadrilateral

20. A shape has vertices at the points, (5, 7), (3, 7), (2, 4), and (4, 4). Plot the vertices and classify the shape using as many names as possible.



polygon, quadrilateral, parallelogram



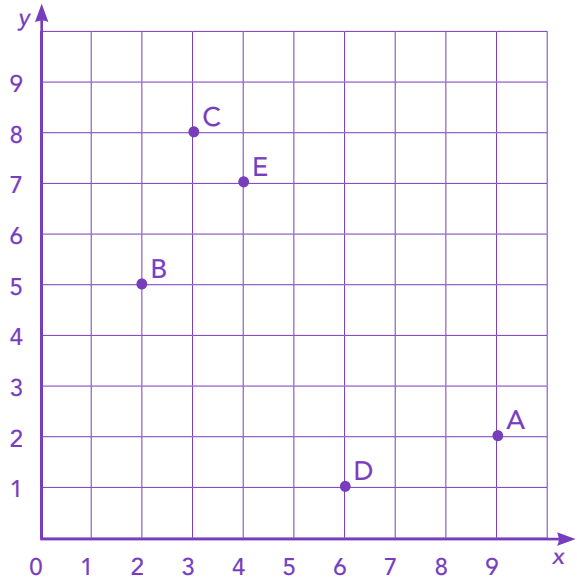
Point A Description: (3, 4)

Point B Description: (4, 2)

Point C Description: (7, 3)

Point D Description: (8, 4)

Point E Description: (6, 7)



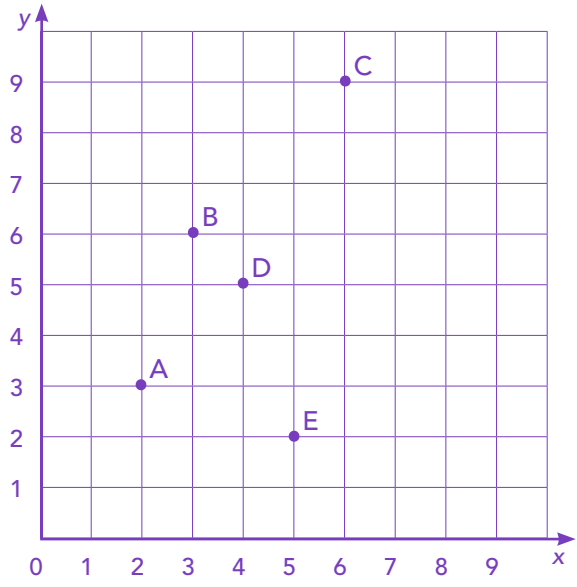
Point A Description: (9, 2)

Point B Description: (2, 5)

Point C Description: (3, 8)

Point D Description: (6, 1)

Point E Description: (4, 7)



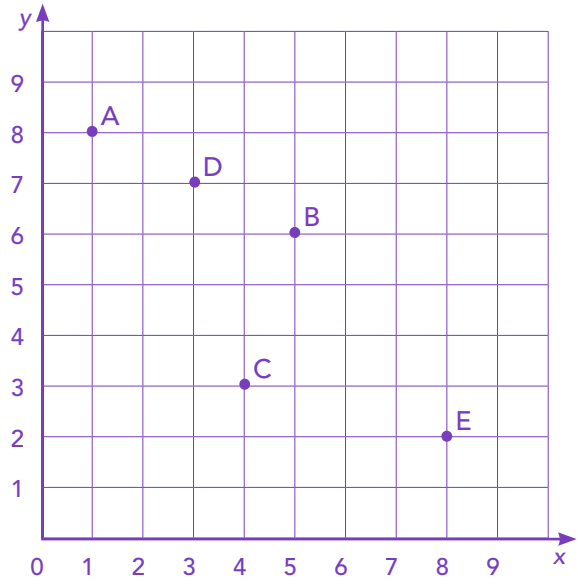
Point A Description: (2, 3)

Point B Description: (3, 6)

Point C Description: (6, 9)

Point D Description: (4, 5)

Point E Description: (5, 2)



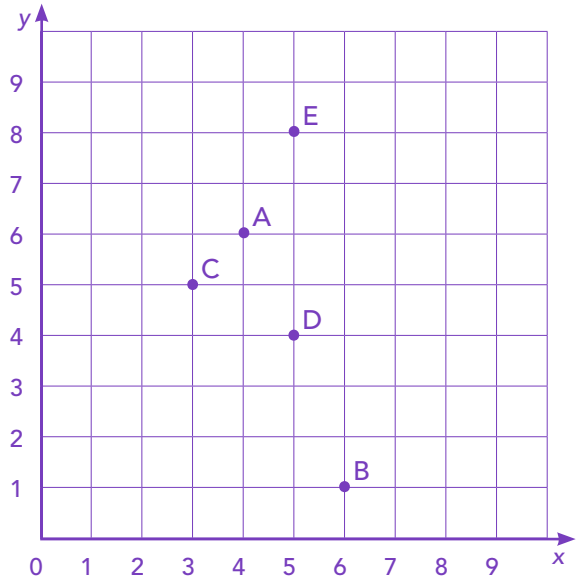
Point A Description: (1, 8)

Point B Description: (5, 6)

Point C Description: (4, 3)

Point D Description: (3, 7)

Point E Description: (8, 2)



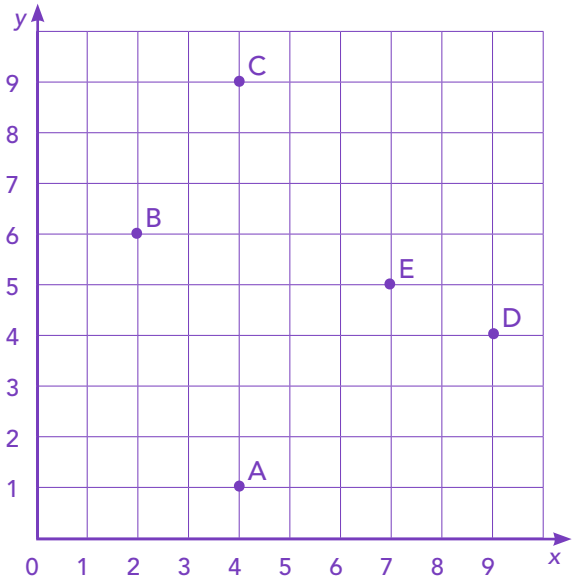
Point A Description: (4, 6)

Point B Description: (6, 1)

Point C Description: (3, 5)

Point D Description: (5, 4)

Point E Description: (5, 8)



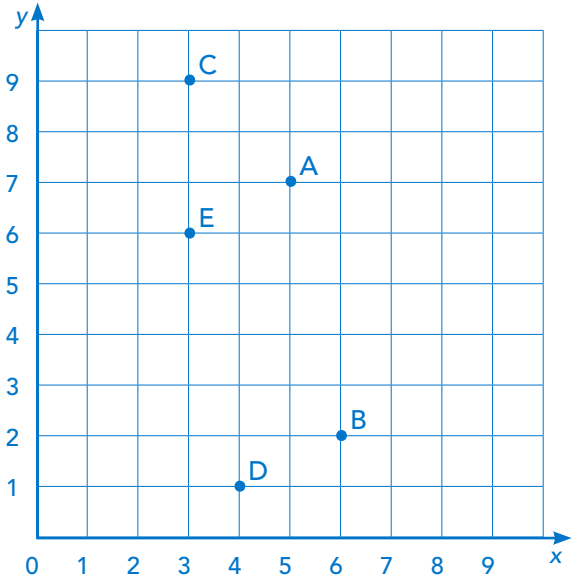
Point A Description: (4, 1)

Point B Description: (2, 6)

Point C Description: (4, 9)

Point D Description: (9, 4)

Point E Description: (7, 5)



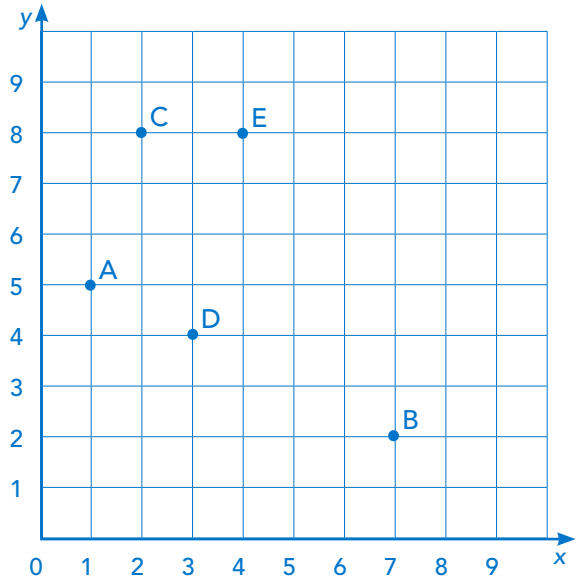
Point A: (5, 7)

Point B: (6, 2)

Point C: (3, 9)

Point D: (4, 1)

Point E: (3, 6)



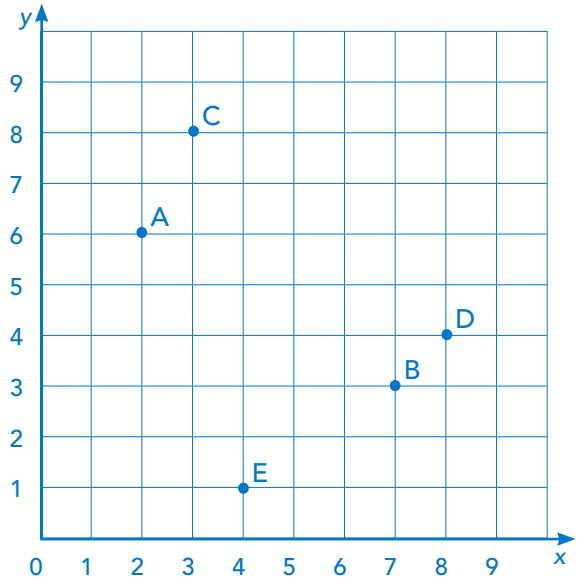
Point A: (1, 5)

Point B: (7, 2)

Point C: (2, 8)

Point D: (3, 4)

Point E: (4, 8)



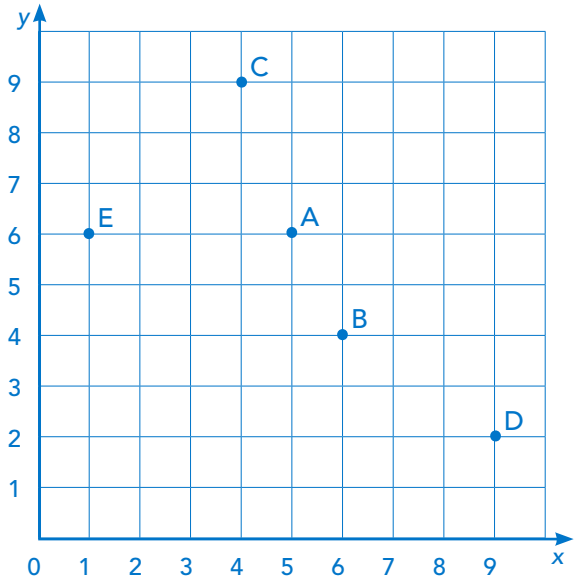
Point A: (2, 6)

Point B: (7, 3)

Point C: (3, 8)

Point D: (8, 4)

Point E: (4, 1)



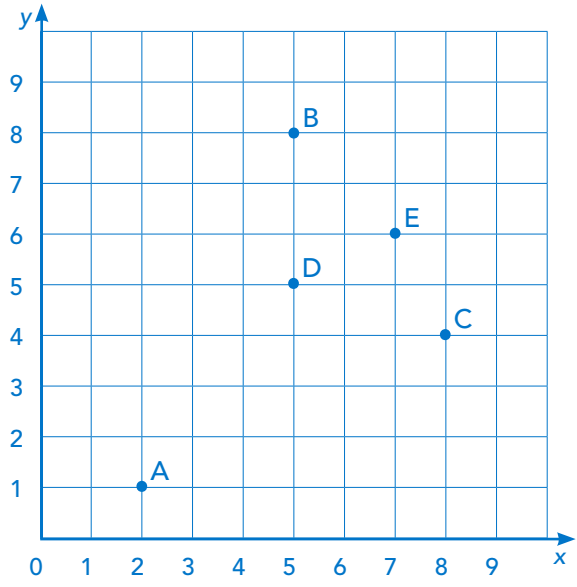
Point A: (5, 6)

Point B: (6, 4)

Point C: (4, 9)

Point D: (9, 2)

Point E: (1, 6)



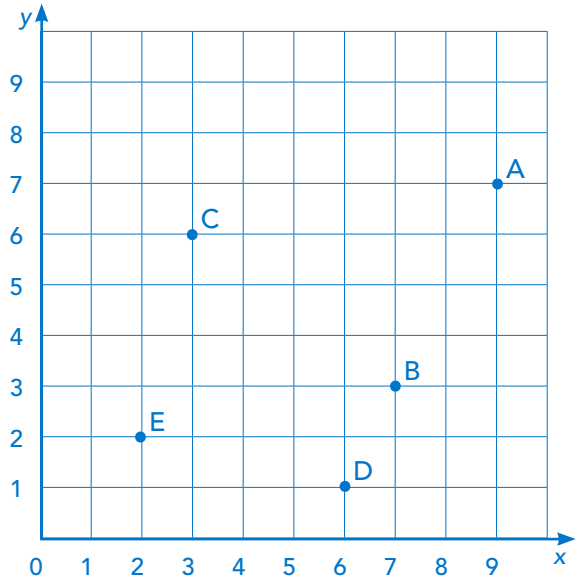
Point A: (2, 1)

Point B: (5, 8)

Point C: (8, 4)

Point D: (5, 5)

Point E: (7, 6)



Point A: (9, 7)

Point B: (7, 3)

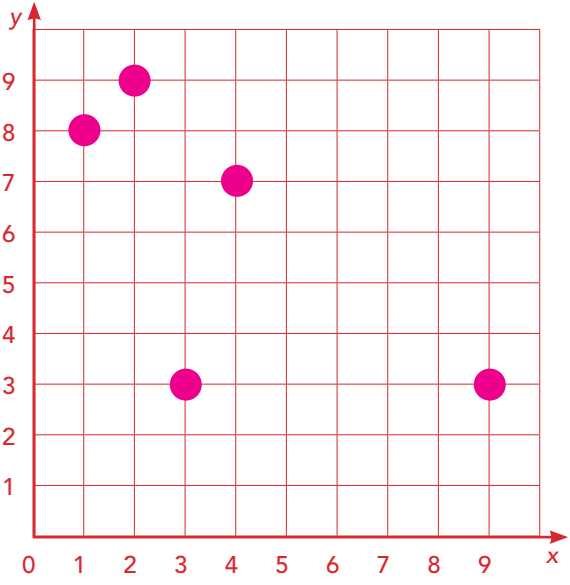
Point C: (3, 6)

Point D: (6, 1)

Point E: (2, 2)

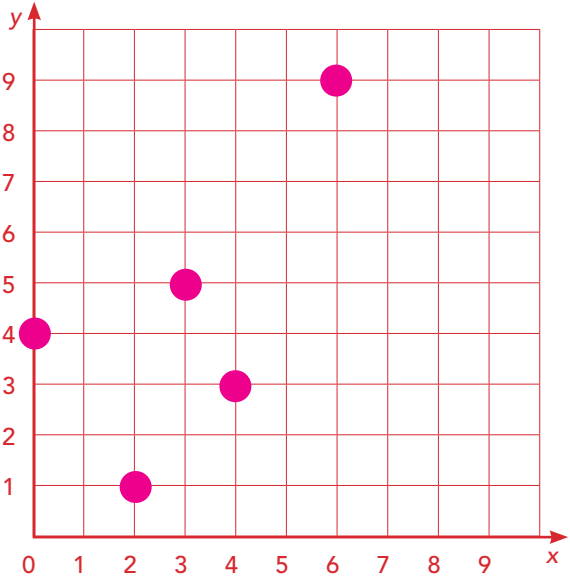
Plot the following points:

Point A: (2, 9)
Point B: (4, 7)
Point C: (1, 8)
Point D: (3, 3)
Point E: (9, 3)



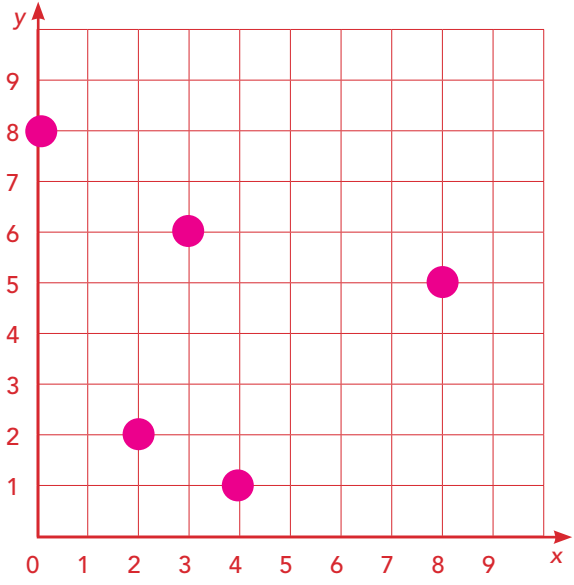
Plot the following points:

Point A: (2, 1)
Point B: (4, 3)
Point C: (3, 5)
Point D: (6, 9)
Point E: (0, 4)



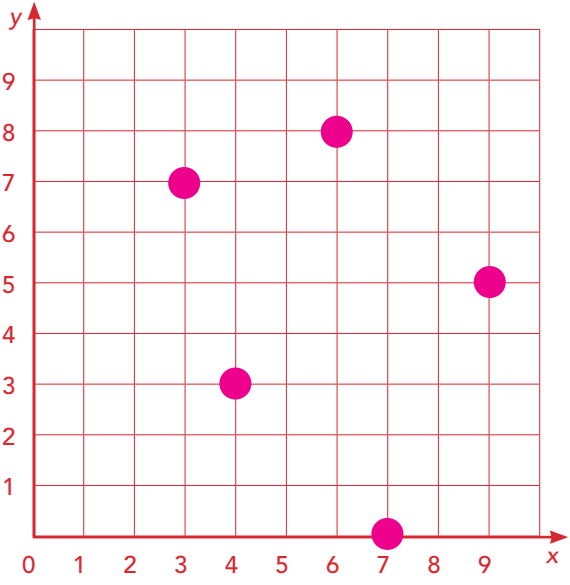
Plot the following points:

Point A: (8, 5)
Point B: (0, 8)
Point C: (2, 2)
Point D: (3, 6)
Point E: (4, 1)



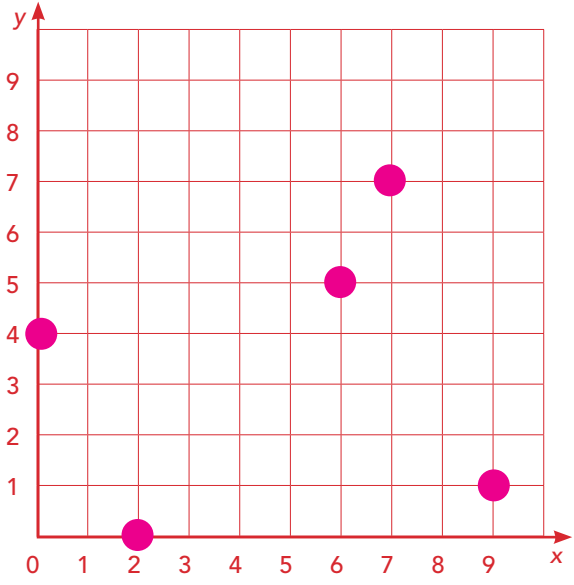
Plot the following points:

Point A: (6, 8)
Point B: (9, 5)
Point C: (3, 7)
Point D: (7, 0)
Point E: (4, 3)



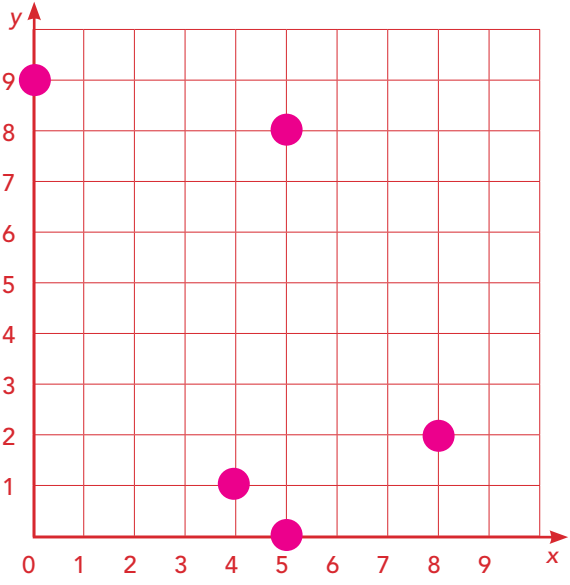
Plot the following points:

Point A: (6, 5)
Point B: (7, 7)
Point C: (0, 4)
Point D: (2, 0)
Point E: (9, 1)



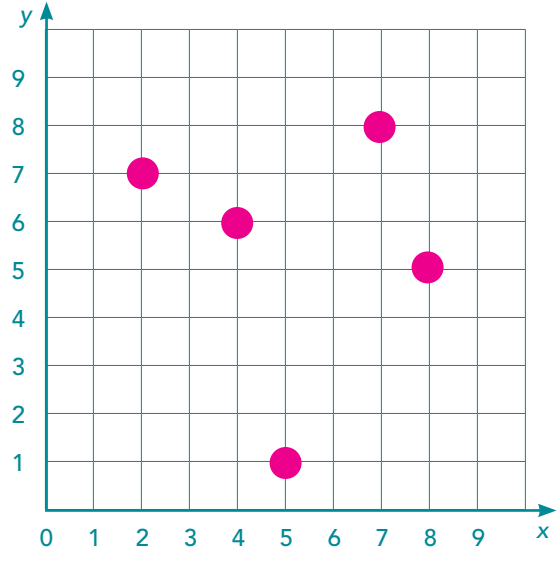
Plot the following points:

Point A: (5, 8)
Point B: (8, 2)
Point C: (4, 1)
Point D: (0, 9)
Point E: (5, 0)



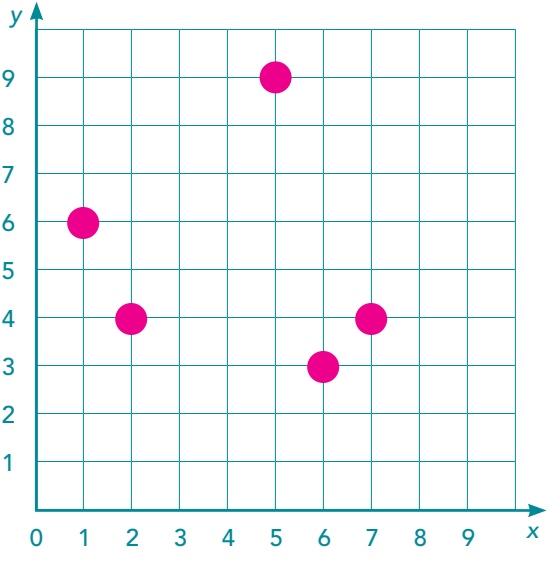
Plot the ordered pairs represented in the table.

Input, x	Output, y
2	7
4	6
5	1
7	8
8	5



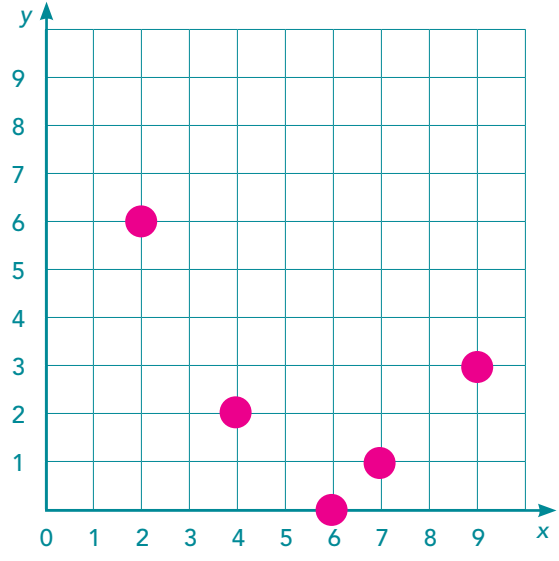
Plot the ordered pairs represented in the table.

Input, x	Output, y
1	6
2	4
5	9
6	3
7	4



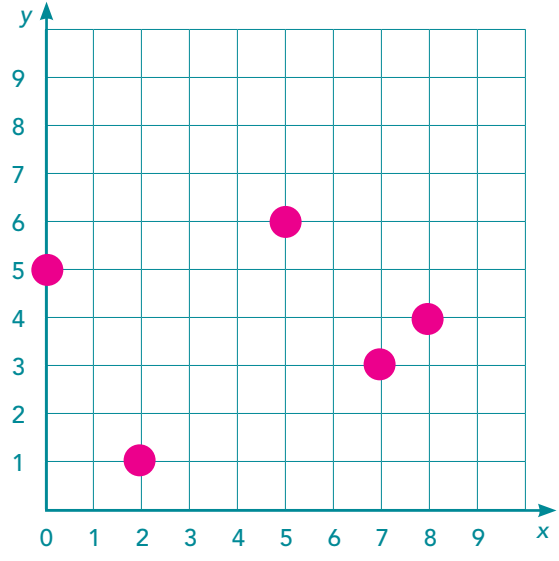
Plot the ordered pairs represented in the table.

Input, x	Output, y
2	6
4	2
6	0
7	1
9	3



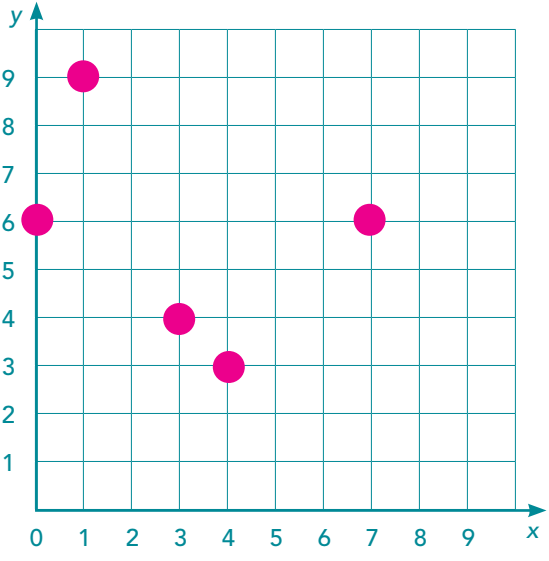
Plot the ordered pairs represented in the table.

Input, x	Output, y
0	5
2	1
5	6
7	3
8	4



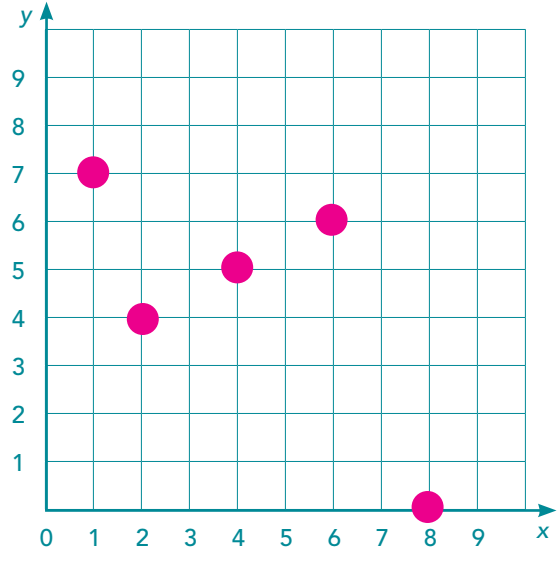
Plot the ordered pairs represented in the table.

Input, x	Output, y
0	6
1	9
3	4
4	3
7	6

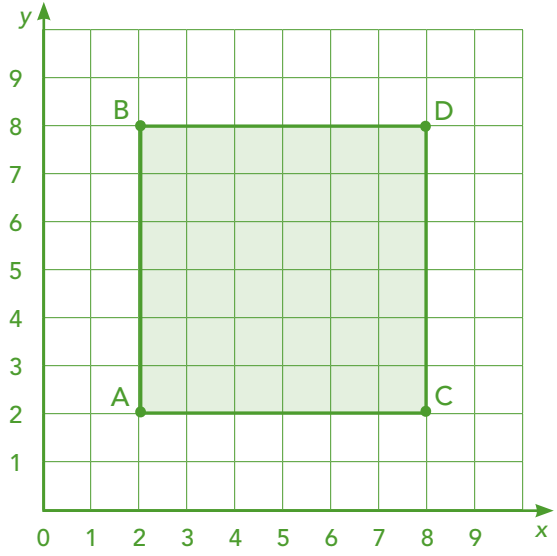


Plot the ordered pairs represented in the table.

Input, x	Output, y
1	7
2	4
4	5
6	6
8	0

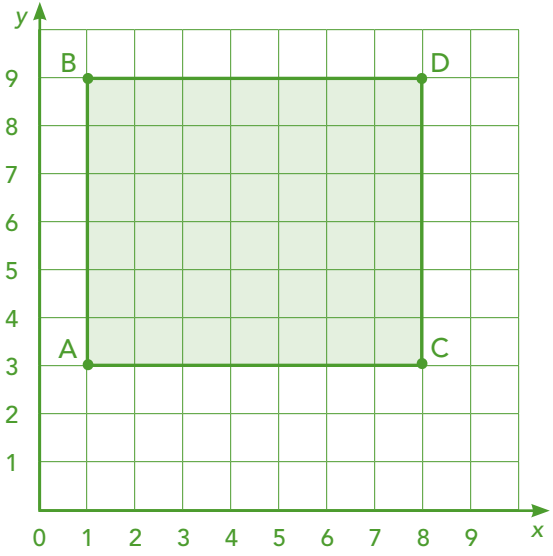


Eric's square garden is plotted on the coordinate plane below. Each unit represents 1 yard. What is the perimeter of his garden?



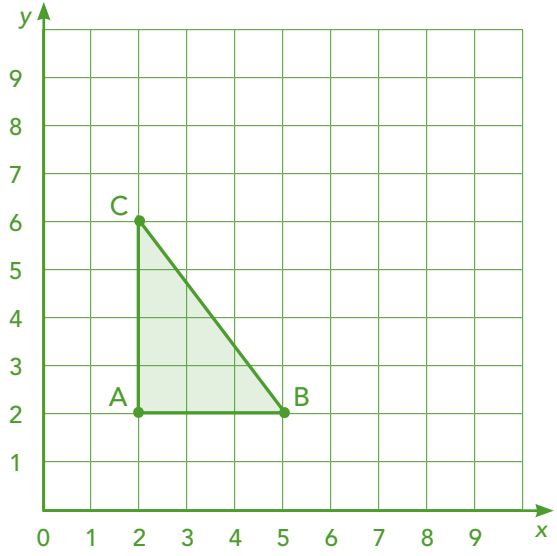
Perimeter: 24 yd.

Jason's rectangular dog pen is plotted on the coordinate plane below. Each unit represents 1 foot. What is the perimeter of his dog pen?



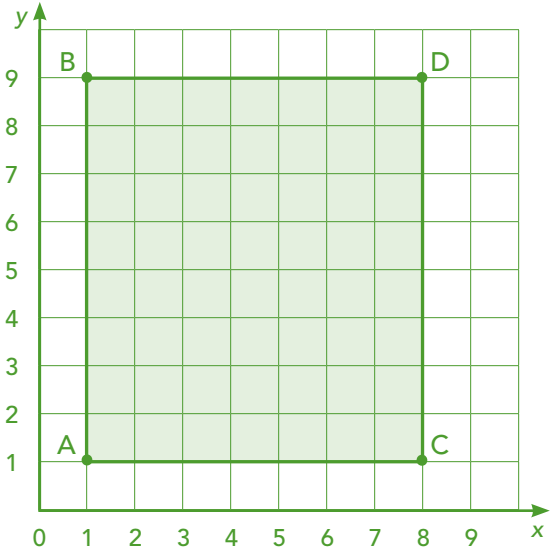
Perimeter: 26 ft.

Andy's triangular garden is plotted on the coordinate plane below. Each unit represents 1 foot. What is the area of his garden?



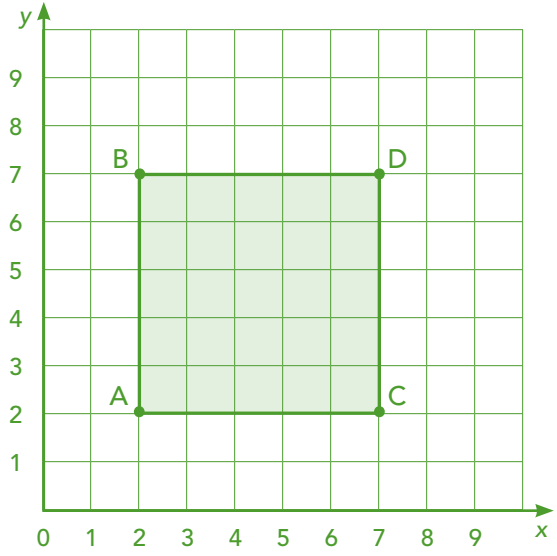
Area: 6 ft.²

Michael's rectangular kitchen floor is plotted on the coordinate plane below. Each unit represents 1 foot. What is the area of his kitchen floor?



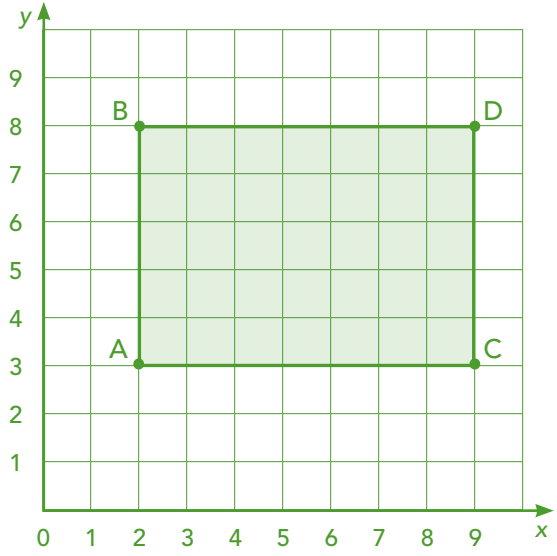
Area: 72 ft.²

Carla's square sandbox is plotted on the coordinate plane below. Each unit represents 1 foot. What is the perimeter of her sandbox?



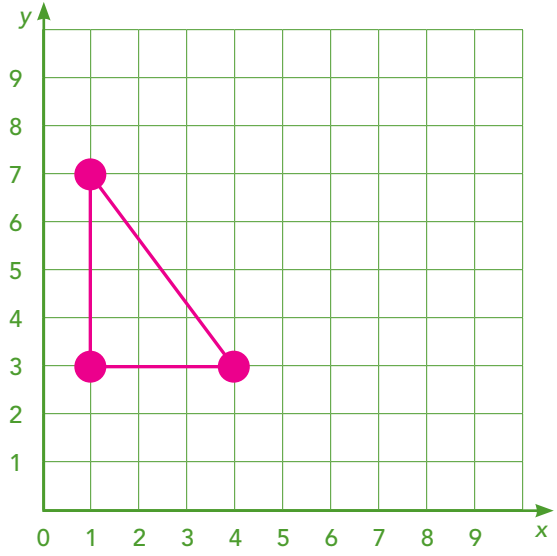
Perimeter: 20 ft.

Arian's rectangular tomato garden is plotted on the coordinate plane below. Each unit represents 1 meter. What is the area of his garden?



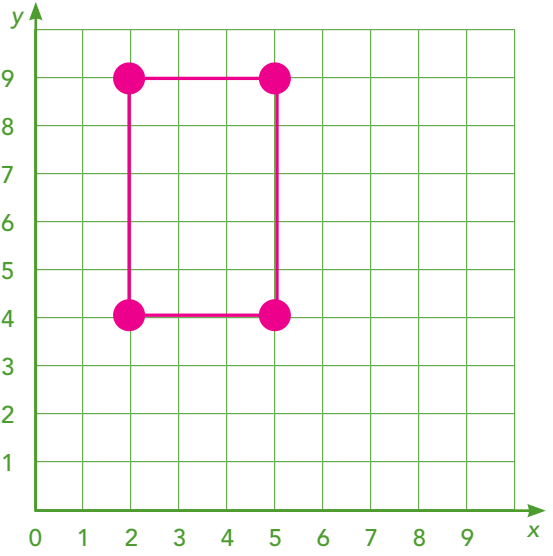
Area: 35 m.^{2}

The vertices of Fred's triangular garden are (1, 3), (1, 7), and (4, 3). Plot the points on the coordinate plane and find the area of his garden. Each unit is 1 foot.



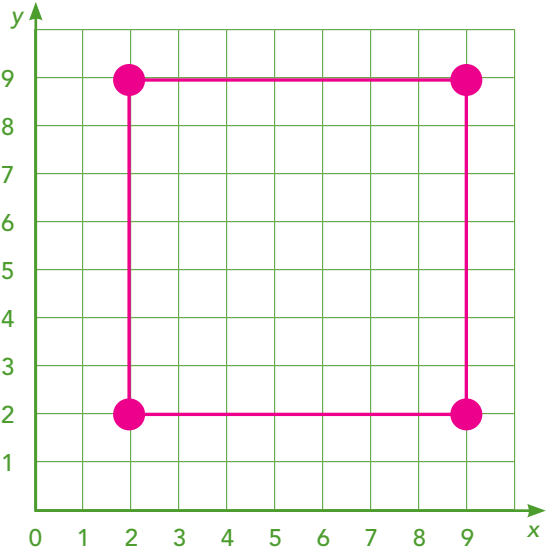
Area: 6 ft.^{2}

The vertices of Ann's rectangular garden are (2, 4), (2, 9), (5, 4), and (5, 9). Plot the points on the coordinate plane and find the area of her garden. Each unit is 1 yard.



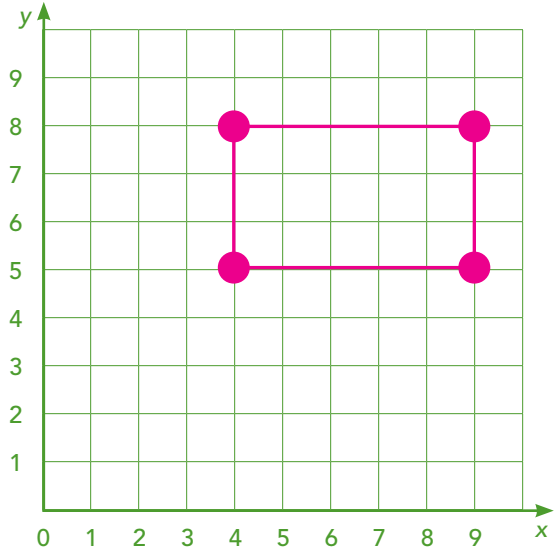
Area: 15 yd.²

The vertices of Amy's square dog pen are (2, 2), (9, 2), (2, 9), and (9, 9). Plot the points on the coordinate plane and find the area of her dog pen. Each unit is 1 foot.



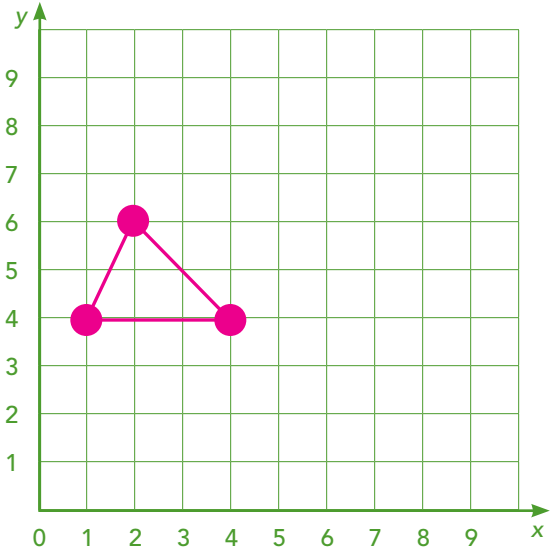
Area: 15 ft.^{2}

The vertices of a swimming pool are (4, 5), (4, 8), (9, 5), and (9, 8). Plot the points on the coordinate plane and find the perimeter of the swimming pool. Each unit is 1 meter.



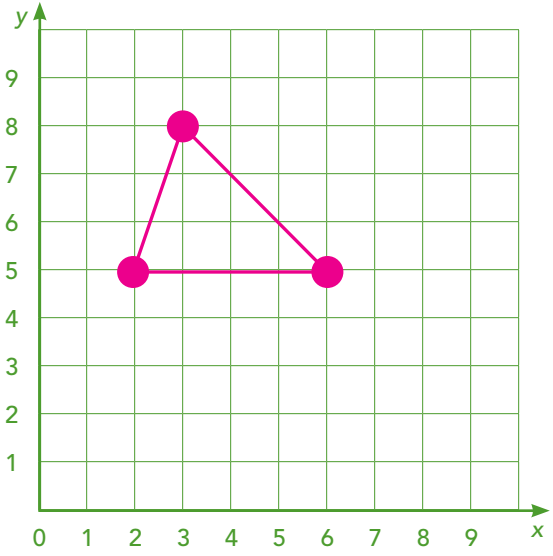
Perimeter: 15 m.

A post office is located at (1, 4). A library is located at (2, 6). A school is located at (4, 4). Plot the points on the coordinate plane and find the area enclosed by these three points. Each unit is 1 mile.



Area: 15 mi.²

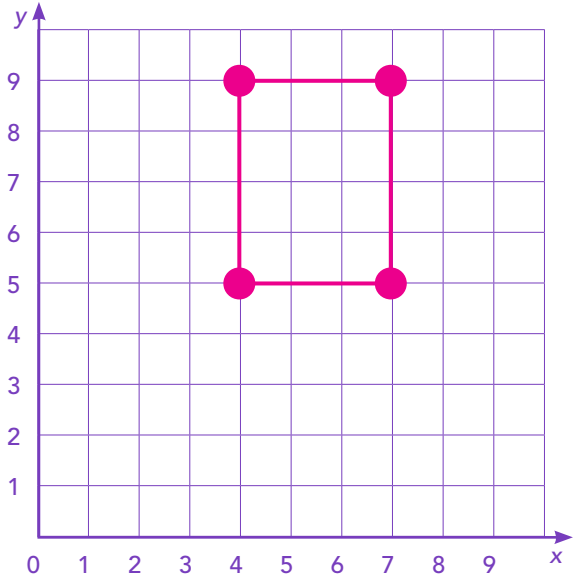
A gym is located at (2, 5). A café is located at (3, 8). A bank is located at (6, 5). Plot the points on the coordinate plane and find the area enclosed by these three points.
Each unit is 1 mile.



Area: 6 mi.²

Plot the following points:

(4, 5), (4, 9), (7, 5), (7, 9)

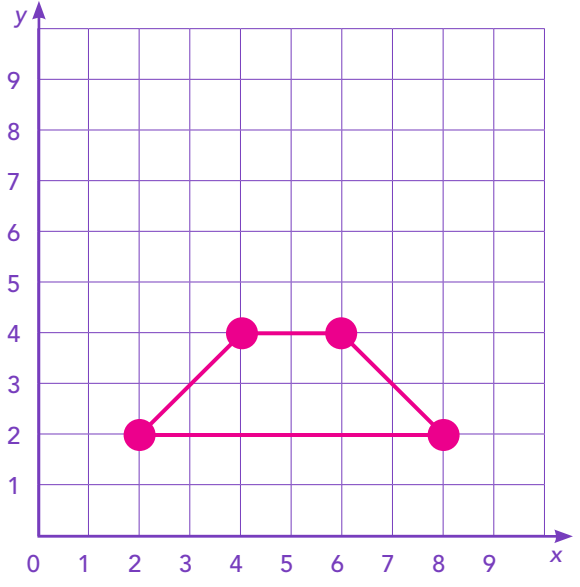


Names used to classify the shape:

polygon, quadrilateral, parallelogram, rectangle

Plot the following points:

(2, 2), (8, 2), (4, 4), (6, 4)

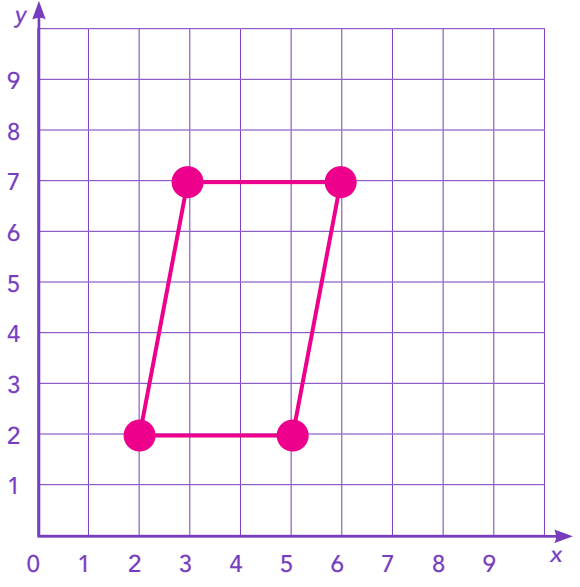


Names used to classify the shape:

polygon, quadrilateral, trapezoid

Plot the following points:

(3, 7), (6, 7), (2, 2), (5, 2)

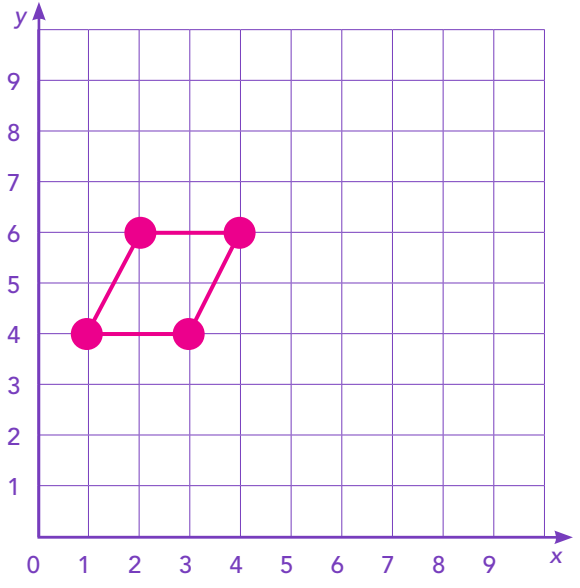


Names used to classify the shape:

polygon, quadrilateral, trapezoid

Plot the following points:

(1, 4), (3, 4), (4, 6), (2, 6)

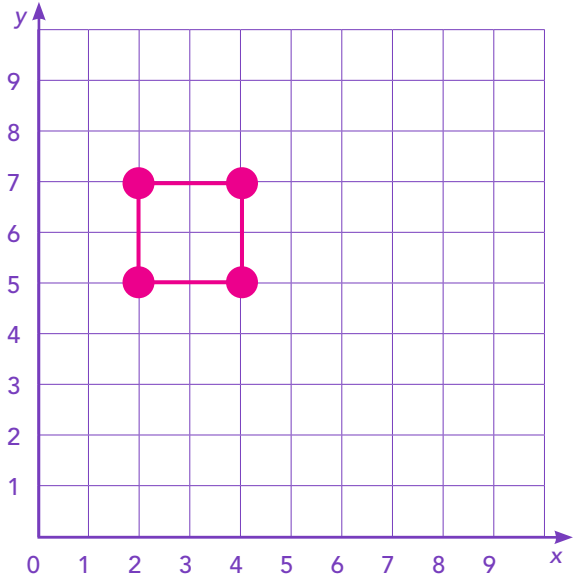


Names used to classify the shape:

polygon, quadrilateral, parallelogram

Plot the following points:

(2, 7), (4, 7), (4, 5), (2, 5)

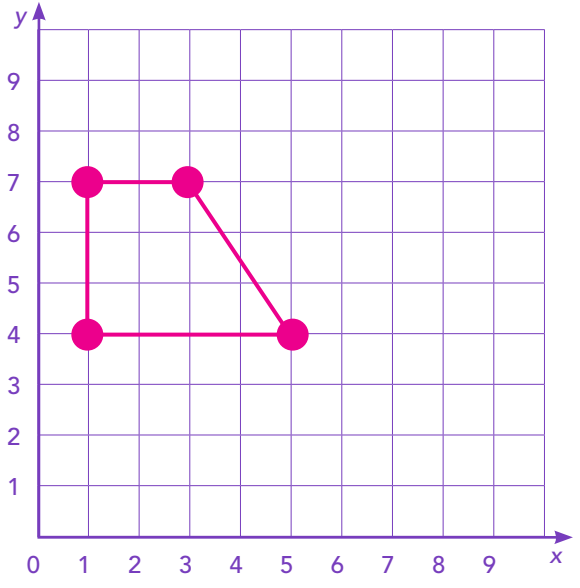


Names used to classify the shape:

polygon, quadrilateral, parallelogram, rectangle, square

Plot the following points:

(1, 7), (1, 4), (3, 7), (5, 4)

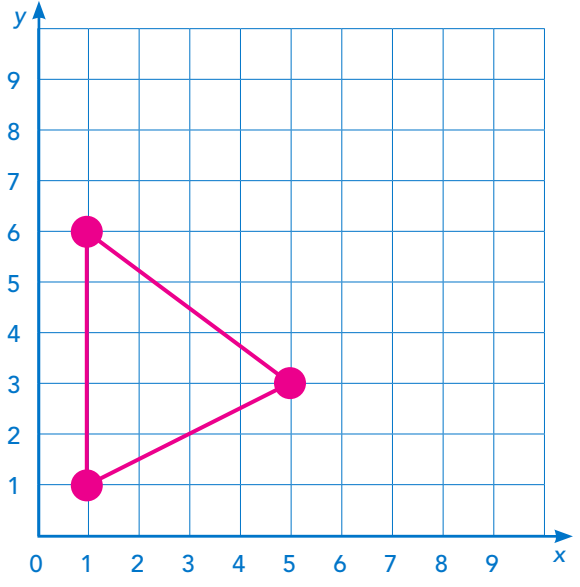


Names used to classify the shape:

polygon, quadrilateral

Plot the following points:

(1, 6), (5, 3), (1, 3)

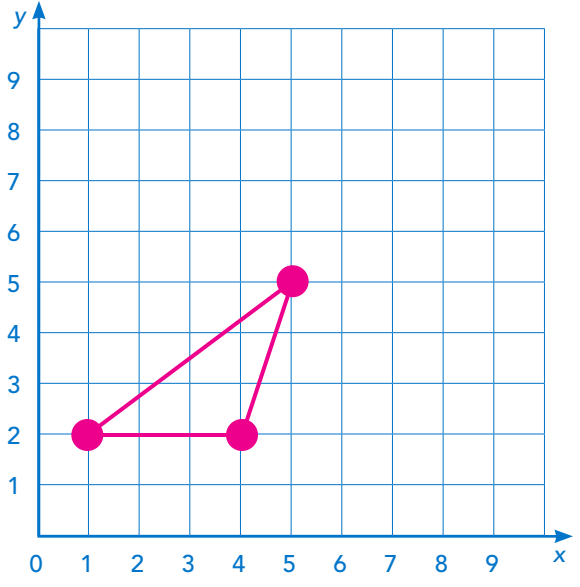


Names used to classify the shape:

polygon, acute triangle, equilateral triangle

Plot the following points:

(5, 5), (4, 2), (1, 2)

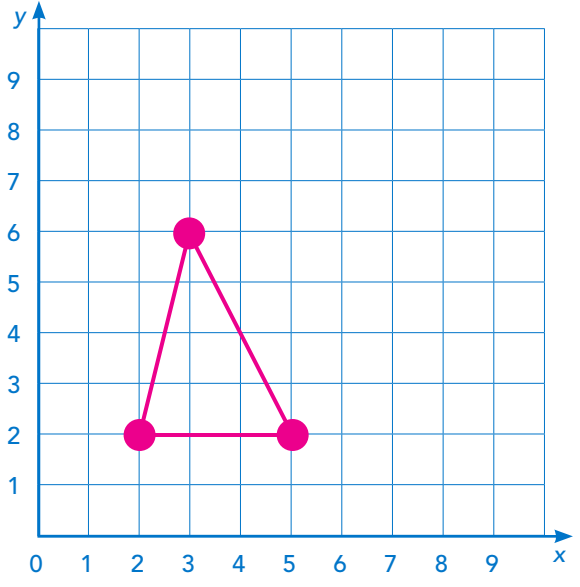


Names used to classify the shape:

obtuse triangle, scalene triangle

Plot the following points:

(3, 6), (5, 2), (1, 2)

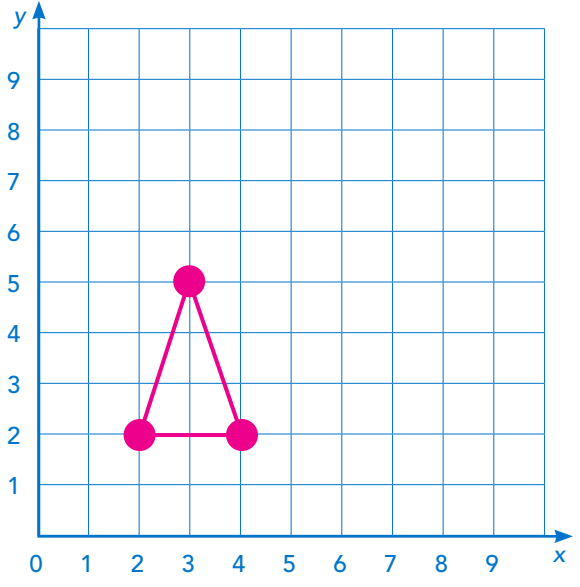


Names used to classify the shape:

acute triangle, scalene triangle

Plot the following points:

(3, 5), (4, 2), (2, 2)

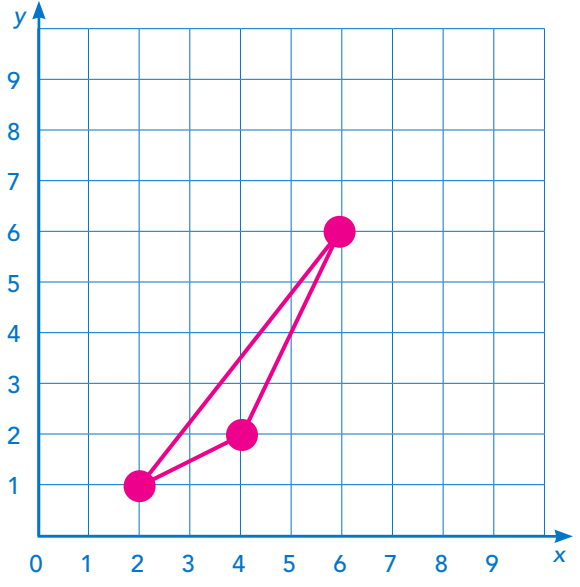


Names used to classify the shape:

acute triangle, isosceles triangle

Plot the following points:

(6, 6), (4, 2), (2, 1)

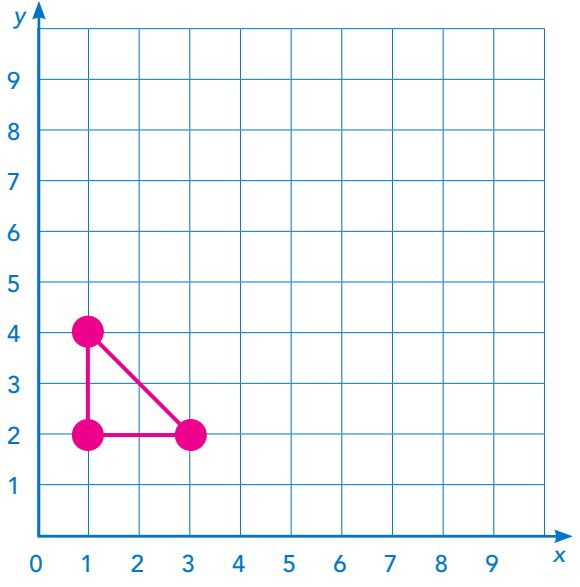


Names used to classify the shape:

obtuse triangle, scalene triangle

Plot the following points:

(1, 2), (1, 4), (3, 2)

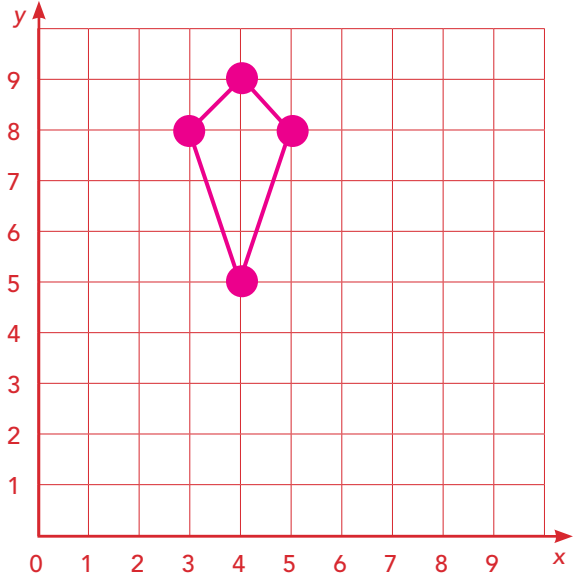


Names used to classify the shape:

right triangle, isosceles triangle

Plot the following points:

(3, 8), (5, 8), (4, 9), (4, 5)

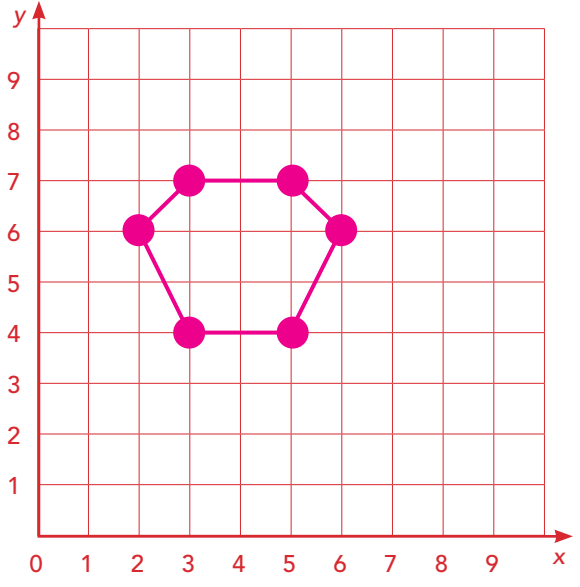


Names used to classify the shape:

polygon, quadrilateral, rhombus

Plot the following points:

(3, 7), (5, 7), (2, 6), (5, 4), (3, 4), (6, 6)

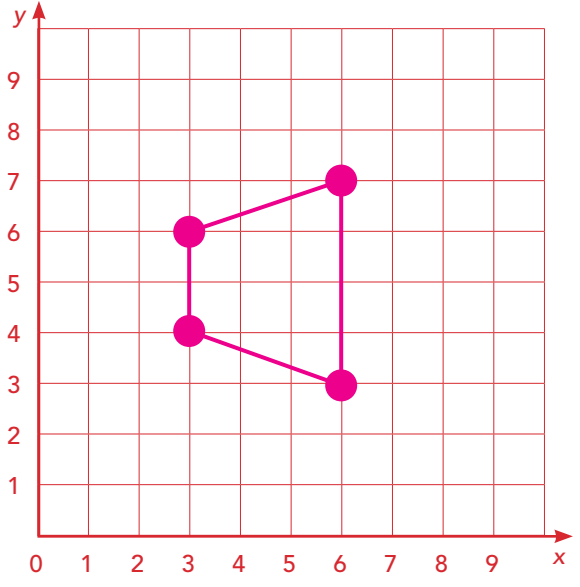


Names used to classify the shape:

polygon

Plot the following points:

(3, 6), (3, 4), (6, 7), (6, 3)

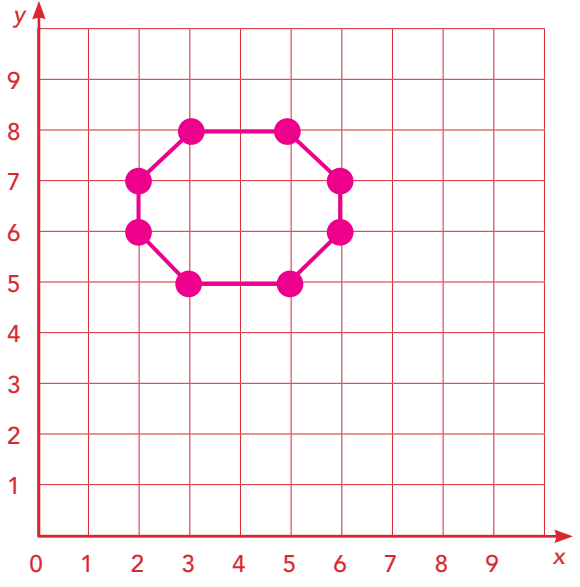


Names used to classify the shape:

polygon, quadrilateral, trapezoid

Plot the following points:

(6, 7), (3, 8), (2, 7), (5, 8), (2, 6), (3, 5), (5, 5), (6, 6)

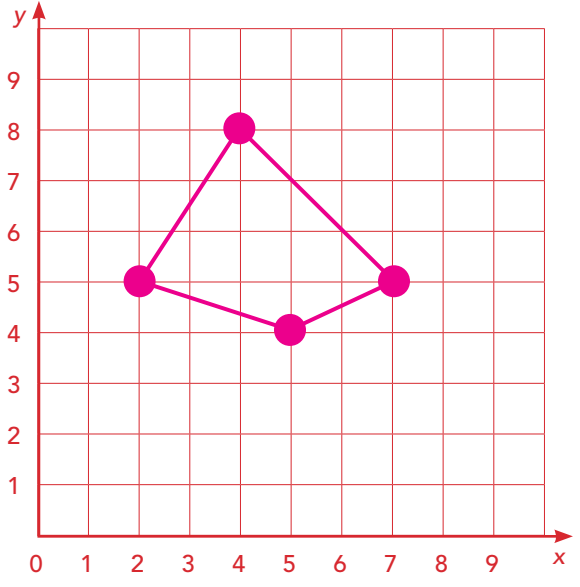


Names used to classify the shape:

polygon

Plot the following points:

(2, 5), (4, 8), (7, 5), (5, 4)

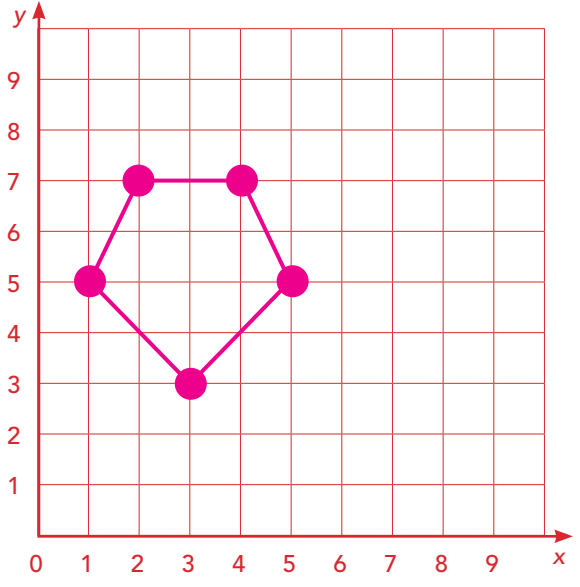


Names used to classify the shape:

polygon, quadtrilateral

Plot the following points:

(2, 7), (4, 7), (1, 5), (5, 5), (3, 3)



Names used to classify the shape:

polygon, pentagon

Draw and name a quadrilateral that has four right angles and four equal sides.

Answers will vary.

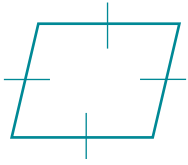
Draw a shape that has more than four sides. Classify the shape.

Answers will vary.

Draw a quadrilateral that has exactly one pair of parallel sides. Name the shape.

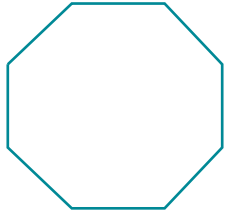
trapezoid

Classify the shape below, using as many names as possible.



polygon, quadrilateral, parallelogram

Classify the shape below.

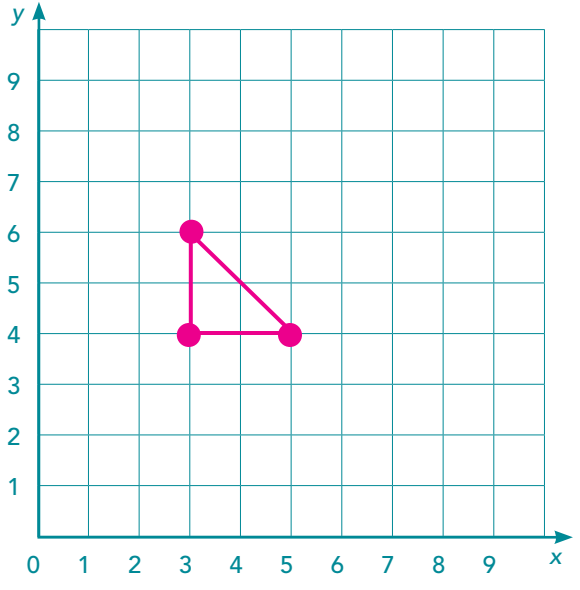


polygon, octagon

List all of the quadrilaterals that are also parallelograms.

rectangle, square, rhombus

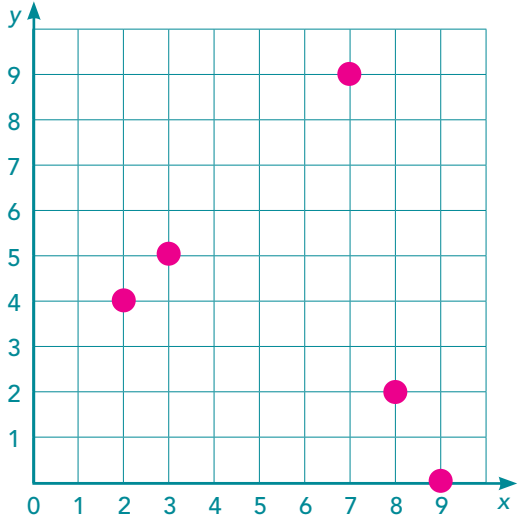
Plot a right triangle on the coordinate plane. List the ordered pairs that represent the vertices.



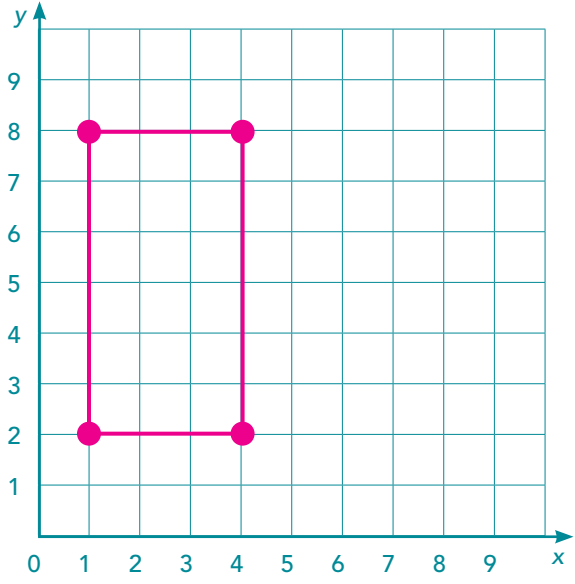
(3, 4), (5, 4), (3, 6)

Use the Input/Output table to plot points on the coordinate plane.

Input, x	Output, y
2	4
3	5
7	9
8	2
9	0

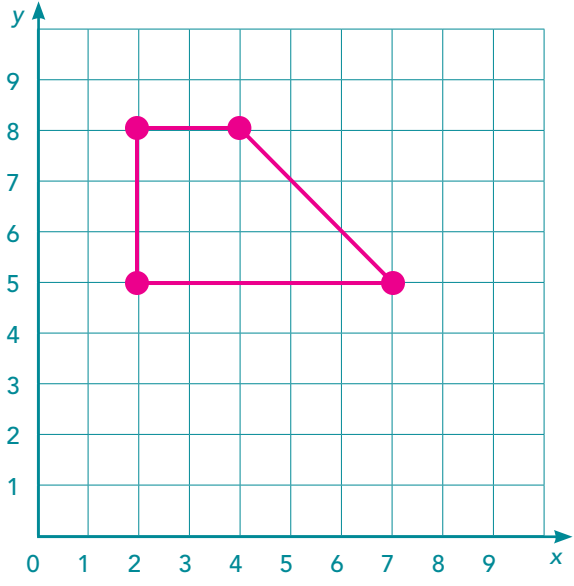


Camille puts a fence along the edges of her yard. She places wooden posts at the points, (1, 2), (1, 8), (4, 2), and (4, 8) on the coordinate plane. If each unit equals 1 meter, what is the perimeter of her yard?



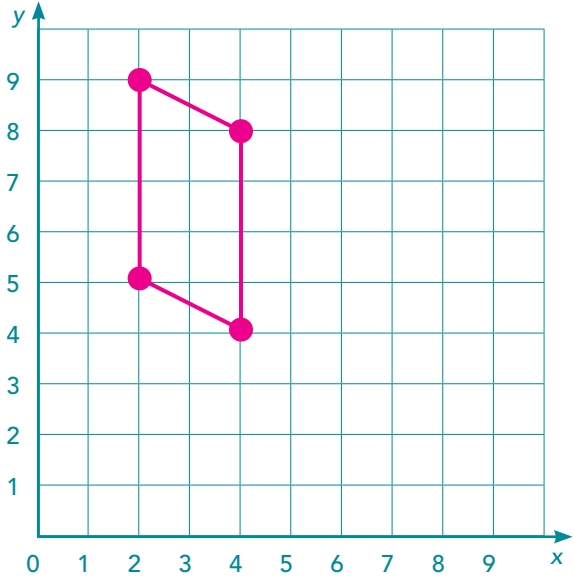
24 yards

Classify the shape with vertices at (2, 5), (2, 8), (4, 8), and (7, 5) using as many names as possible.



polygon, quadrilateral

Classify the shape with vertices at (2, 5), (2, 9), (4, 8), and (4, 4) using as many names as possible.



A right triangle has vertices at (3, 7) and (5, 7). What could be the location of the third vertex?

Sample answer: