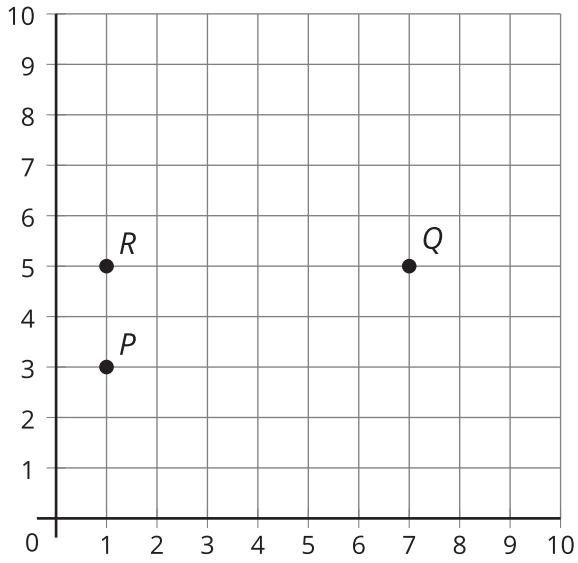
Shapes on the Coordinate Plane: End-of-Unit Assessment

1. Select **all** true statements about the points on the graph.



A. The coordinates of P are $(1, 3)$.

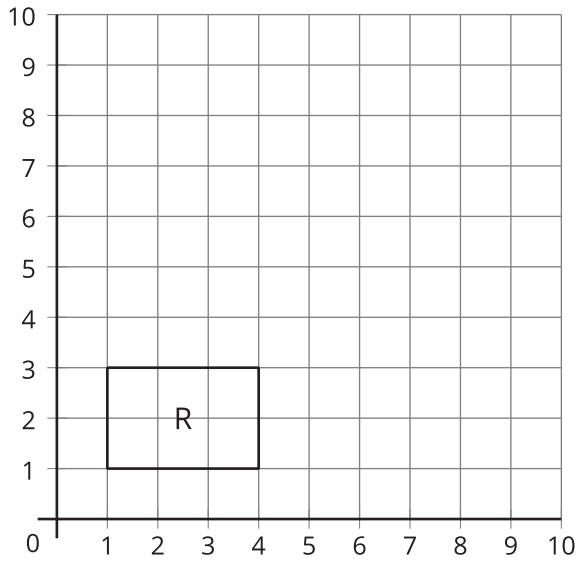
B. The coordinates of P are $(3, 1)$.

C. The coordinates of Q are $(7, 5)$.

D. The horizontal coordinate of P is the same as the horizontal coordinate of R.

E. The horizontal coordinate of Q is the same as the horizontal coordinate of R.

2. a. Explain why quadrilateral R is a rectangle.



b. Draw a rhombus in the coordinate plane that is not a square. Explain why it is a rhombus and why it is not a square.

3. Fill in each blank with the correct word, “sometimes,” “always,” or “never.”

a. A parallelogram is _____ a rhombus.

b. A rhombus is _____ a parallelogram.

c. A rectangle is _____ a rhombus.

d. A quadrilateral with a 35 degree angle is _____ a rectangle.

4. For a quadrilateral:

- one pair of sides have the same length
- the other pair of sides also have the same length
- the sides are not all the same length

What could the quadrilateral be? Select **all** that apply.

A. trapezoid

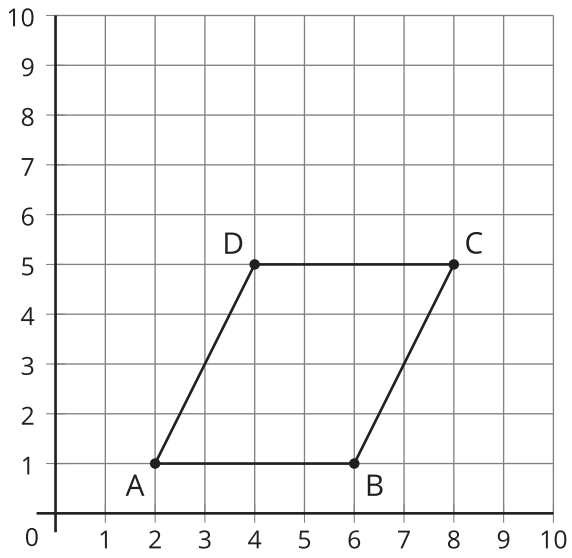
B. parallelogram

C. rhombus

D. rectangle

E. square

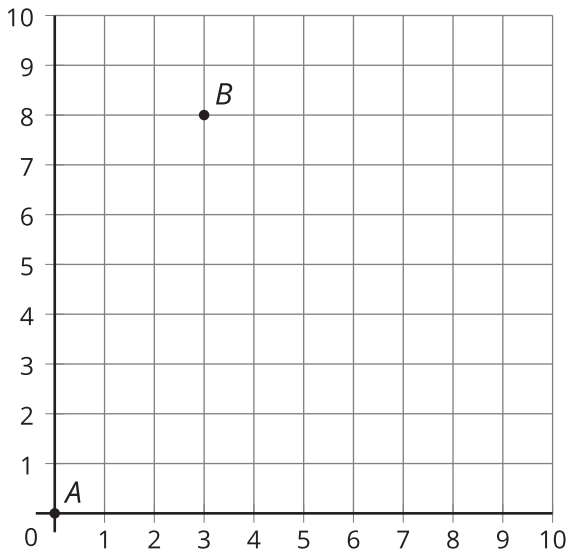
5. a. Is quadrilateral $ABCD$ a parallelogram? Explain or show your reasoning.



b. Is quadrilateral $ABCD$ a rhombus? Explain or show your reasoning.

c. Is quadrilateral $ABCD$ a rectangle? Explain or show your reasoning.

6. a. What are the coordinates of the point labeled A? Explain or show your reasoning.



b. What are the coordinates of the point labeled B? Explain or show your reasoning.

7. Here are two rules and the beginning of their patterns.

   - Jada's rule: Start with 0 and keep adding 25.

0	25	50	75	100

   - Priya's rule: Start with 0 and keep adding 5.

0	5	10	15	20

   Select **all** true statements about the patterns.

   A. All of the numbers in Priya's pattern are in Jada's pattern.

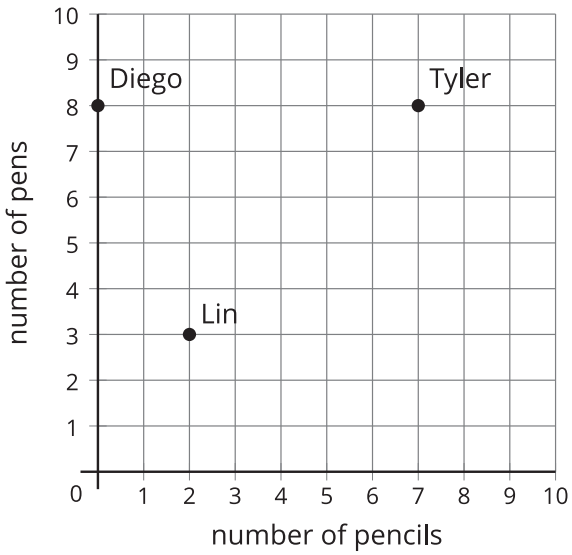
   B. When Priya's pattern has 200, Jada's pattern has 1,000.

   C. Each number in Jada's pattern is 5 times the corresponding number in Priya's pattern.

   D. The number 220 is in Jada's pattern and in Priya's pattern.

   E. Each number in Priya's pattern is $\frac{1}{5}$ the corresponding number in Jada's pattern.

8. a. How many pencils does Diego have? How many pens?



b. Do any of the students have the same number of pens as pencils? Explain or show your reasoning.

c. Mai has the same number of pencils as Tyler and the same number of pens as Lin. What are the coordinates of the point that represents Mai? Explain or show your reasoning. Label this point on the graph.