Graphing Points on the Coordinate Plane Worksheet

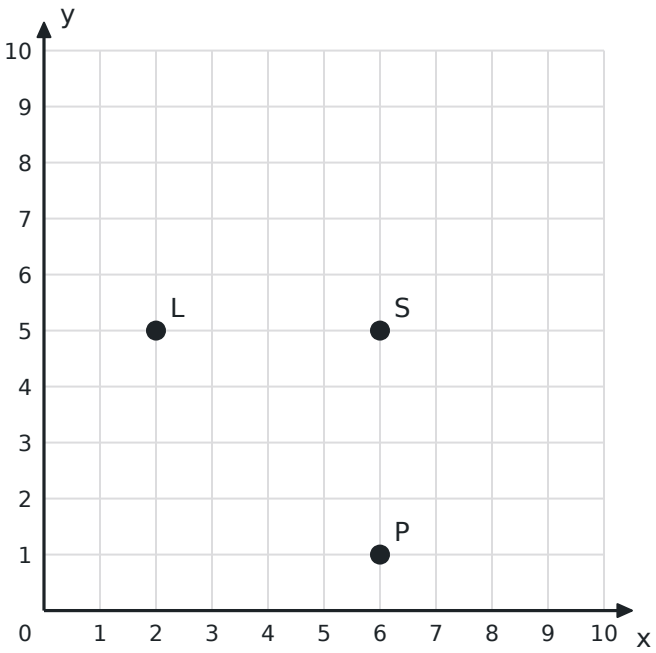
Grade 5 · Common Core 5.G.A.2

> Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.

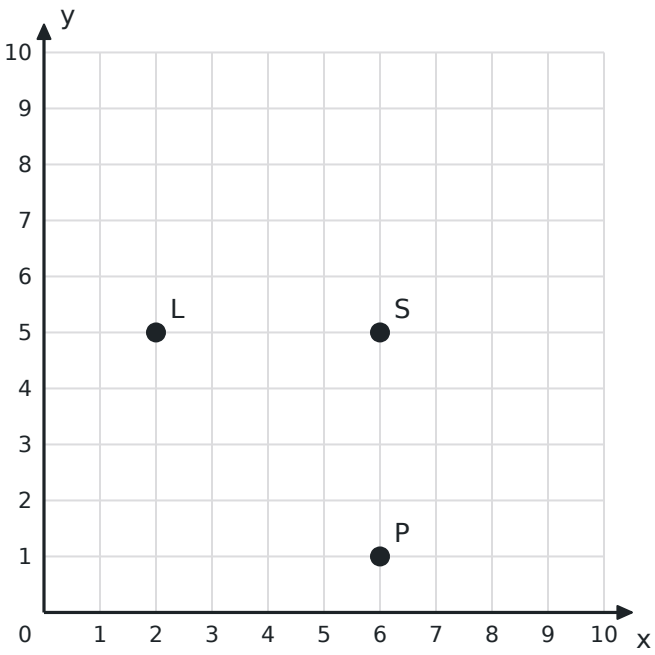
Practice

Builds the skill step by step.

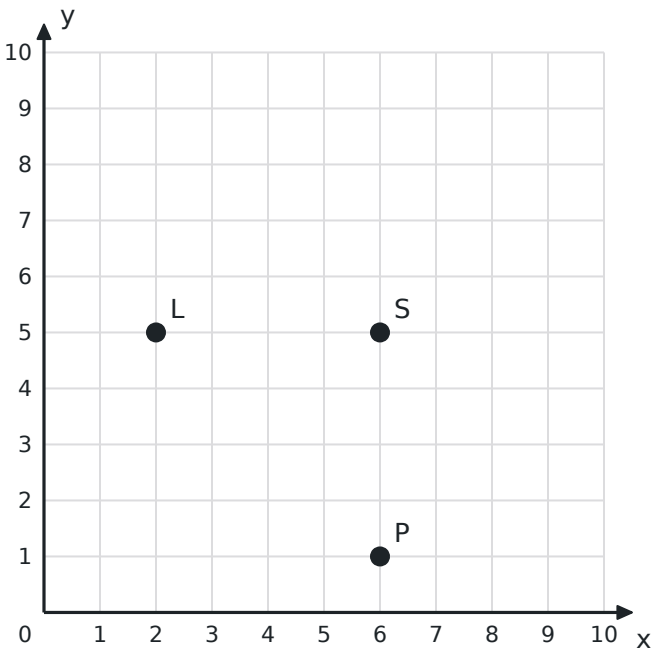
1. On the map, each unit is 1 block. How many blocks is it from the library L to the school S?



2. On the map, how many blocks is it from the school S to the park P?



3. On the map, what does the park's location (6, 1) mean?



A. It is 1 block east and 6 blocks north.

B. It is 6 blocks from the library.

C. It is the 6th park.

D. It is 6 blocks east and 1 block north of (0, 0).

4. A car travels 3 miles each hour. The points (1, 3), (2, 6) and (3, 9) show hours and miles. What is the next point?

5. For the car points (hours, miles), what does the point (3, 9) mean?

A. The car goes 9 miles per hour.

B. After 9 hours, the car has gone 3 miles.

C. After 3 hours, the car has gone 9 miles.

D. The car stops at 3 miles.

6. Each ticket costs 2 dollars. On a graph of (tickets, cost), what point shows 5 tickets?

7. On a graph of (weeks, dollars saved), what does the point (4, 20) mean?

   A. After 4 weeks, 20 dollars are saved.

   B. After 20 weeks, 4 dollars are saved.

   C. 20 dollars are saved each week.

   D. 4 dollars are saved each week.

8. The rule is "y is x plus 3." What point has x = 2?

9. Leo walks from (0, 0) to (3, 0), then to (3, 4), along the grid lines. How many units does he walk?

10. Each car has 4 wheels. On a graph of (cars, wheels), what point shows 3 cars?

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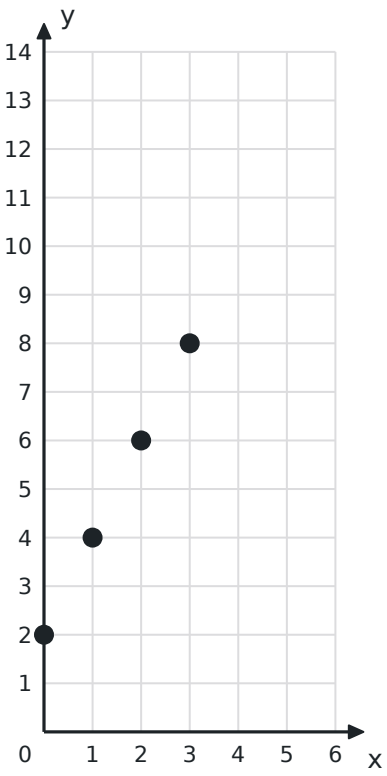
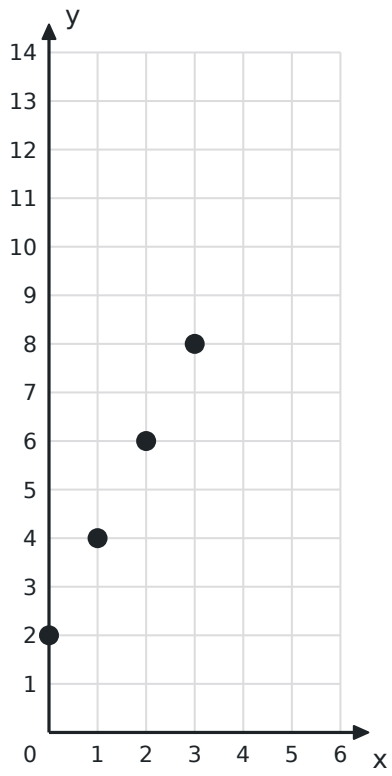
On Level

Grade-level practice.

1. The graph shows a plant's height each week. How many centimeters does it grow each week?



2. If the plant keeps growing the same way, what point shows week 5?



3. Pattern A starts at 0 and adds 3. Pattern B starts at 0 and adds 6. Make an ordered pair (A term, B term) from the 4th terms after the start (the terms after adding 4 times). What is it?

4. Home is at (1, 1) and the store is at (5, 4). Along grid lines, what is the shortest walk in blocks?

5. On a graph, x is hours driven and y is miles traveled. Explain what the point (3, 45) means.

6. The rule is "y is 4 times x." What point has x = 3?

7. A pattern starts at 1 and adds 2, giving (0, 1), (1, 3), (2, 5). Which point is NOT on this pattern?

   A. (3, 8)

   B. (3, 7)

   C. (4, 9)

   D. (5, 11)

8. The temperature starts at 50 degrees and rises 2 degrees each hour. On a graph of (hours, temperature), what point shows hour 4?

9. Clues on a map say the treasure is halfway between (2, 3) and (2, 7). Where is it?

10. On a graph of (notebooks, cost), 3 notebooks cost 6 dollars. Each notebook costs the same. What is the y-coordinate for 7 notebooks?

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Challenge

Multi-step and word problems that stretch it.

1. Ana runs 5 meters each second and Ben runs 4. Their graphs are (seconds, meters). After 4 seconds, how far ahead is Ana?

2. A bike rents for 10 dollars plus 5 dollars per hour. What point (hours, dollars) shows 6 hours?

3. Points (0, 0), (2, 3) and (4, 6) follow a pattern. What is y when x = 10?

4. A pool fills at 150 gallons each hour, shown as (hours, gallons): (0, 0), (1, 150), (2, 300). At what hour does it reach 750 gallons?

5. A fire station is at (3, 2). Houses are at (3, 8), (9, 2) and (7, 6). Along grid lines, which house is farthest from the station?

   A. (9, 2)

   B. They are all the same distance.

   C. (3, 8)

   D. (7, 6)

6. A pattern starts at 1 and adds 3 each step: (0, 1), (1, 4), (2, 7). What is y when x = 5?

7. On a savings graph of (weeks, dollars), the first point is (0, 25). What does that mean?

   A. Nothing was saved.

   B. 25 dollars were saved before week 1 started.

   C. 25 dollars are saved each week.

   D. 25 weeks have passed.

8. A garden has corners at (2, 1), (8, 1), (8, 5) and (2, 5). Each unit is 1 meter. How much fencing goes around it?

9. What is the area of that garden (corners (2, 1), (8, 1), (8, 5), (2, 5))?

10. Tickets cost 3 dollars each. Explain why the points (tickets, cost) go up by the same amount each time.