

Plotting Points and Shapes on the Coordinate Plane

Grade 6 math · Test · Standards: 6.NS.C.6b, 6.NS.C.6c, 6.NS.C.8, 6.G.A.3

Name: _____ Date: _____ Class: _____

This 45-minute test has 9 questions worth 20 points. Show your work and label units where needed. Rulers are allowed for drawing, but calculators are not.

Standards: 6.NS.C.6b, 6.NS.C.6c, 6.NS.C.8, 6.G.A.3 · **Level:** Grade 6

Time: 45 minutes · 9 questions · Total: 20 points · Calculator: as allowed by your teacher

Question 1 Quadrant or axis (2 points)

- a. In which quadrant is $(-8, -1)$? (1 point)
- b. On which axis does the point $(0, -7)$ lie? (1 point)

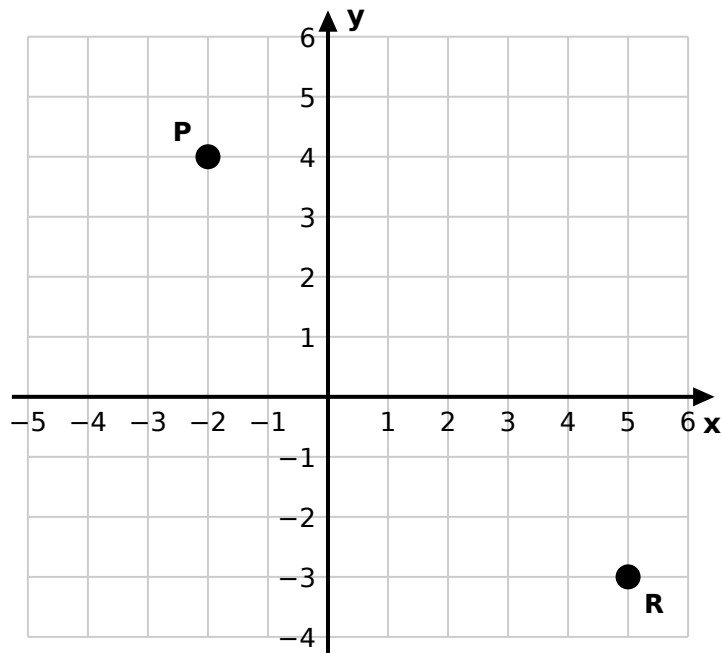
Question 2 Reflecting a point (2 points)

The point Q is $(-9, 2)$.

- a. Reflect Q across the x -axis. (1 point)
- b. Reflect Q across the y -axis. (1 point)

Question 3 Reading a graph (2 points)

Use the graph.



Points P and R.

- Write the coordinates of P and R. (1 point)
- Name the quadrant of each point. (1 point)

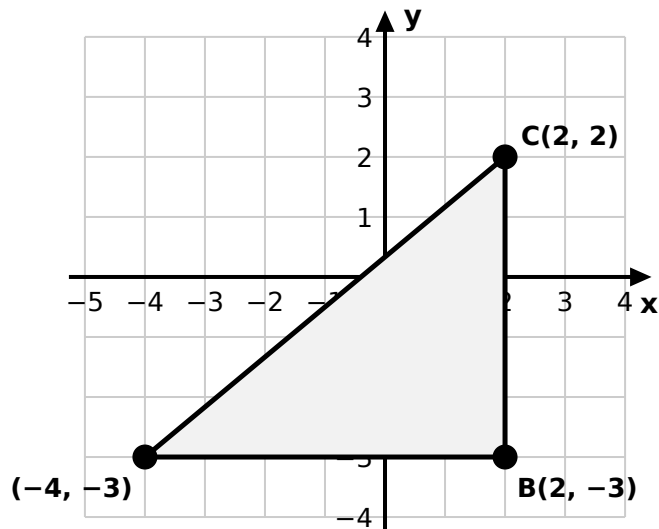
Question 4 Distances (2 points)

Find each distance.

- $(-8, 5)$ to $(3, 5)$ (1 point)
- $(6, -4)$ to $(6, -10)$ (1 point)

Question 5 Triangle on the plane (3 points)

Triangle ABC is shown.



Triangle ABC.

- a. Find the length of side AB. (1 point)
- b. Find the length of side BC. (1 point)
- c. Write the vertices of the triangle after a reflection across the y -axis. (1 point)

Question 6 Camp map (3 points)

On a camp map, the Camp is at $(-6, -3)$, the Lake is at $(-6, 5)$ and the Lodge is at $(4, 5)$. One unit is 1 block.

- a. How far is it from the Camp to the Lake? (1 point)
- b. How far is it from the Lake to the Lodge? (1 point)
- c. How far does a hiker travel going Camp to Lake to Lodge? (1 point)

Question 7 Missing coordinates (2 points)

- a. The point $(a, -4)$ is the reflection of $(7, -4)$ across the y -axis. Find a . (1 point)
- b. Three vertices of a rectangle are $(2, 1)$, $(8, 1)$ and $(8, -5)$. Find the fourth vertex. (1 point)

Question 8 Decimal coordinates (3 points)

Point M is at $(-1.5, 2.5)$.

- a. In which quadrant is M? (1 point)
- b. Write the reflection of M across the x -axis. (1 point)
- c. Write the reflection of M across the y -axis. (1 point)

Question 9 Order matters (1 point)

Marta says the pairs $(11, -3)$ and $(-3, 11)$ name the same location on a map grid. Is she right? Explain.