

Plotting Points and Shapes on the Coordinate Plane

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

Use this answer key to score the test. Each solution identifies the matching coordinate, then the distance or reflection. Award partial credit for correct reasoning with a small slip.

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

Question 1 Quadrant or axis (2 points)

- (a) Both coordinates are negative: **Quadrant III.**
- (b) The x-coordinate is 0: **the y-axis.**

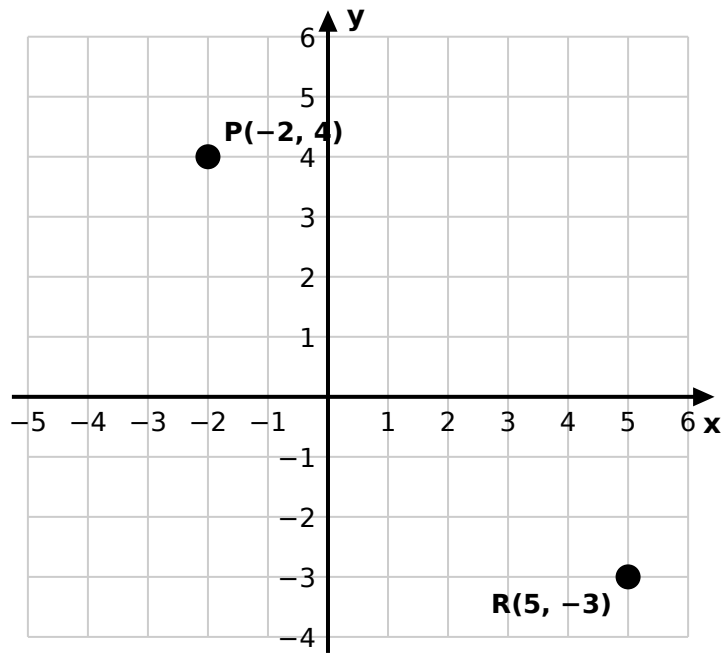
Scoring: 1 point per part.

Question 2 Reflecting a point (2 points)

- (a) The y-coordinate changes sign: **(-9, -2).**
- (b) The x-coordinate changes sign: **(9, 2).**

Scoring: 1 point per part.

Question 3 Reading a graph (2 points)



$P(-2, 4)$ and $R(5, -3)$.

(a) **$P(-2, 4)$ and $R(5, -3)$.**

(b) P has $-$ and $+$: **Quadrant II**. R has $+$ and $-$: **Quadrant IV**.

Scoring: 1 point per part; both points must be right to earn the point.

Question 4 Distances (2 points)

(a) y matches; the x-values have different signs: $8 + 3 =$ **11 units**.

(b) x matches; both y-values are negative: $10 - 4 =$ **6 units**.

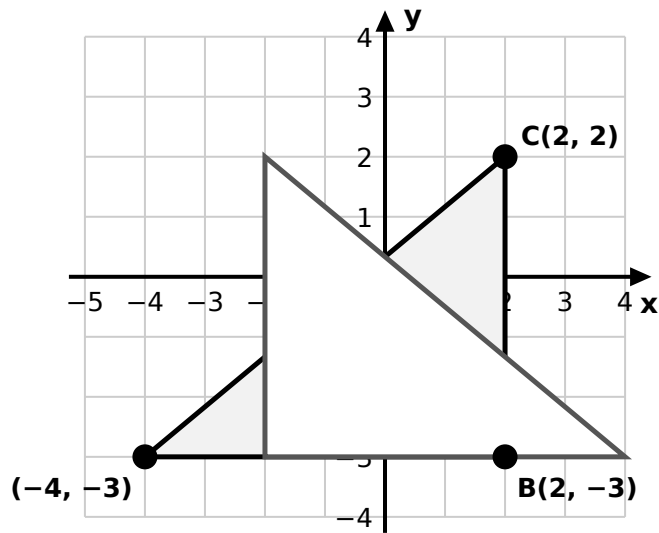
Scoring: 1 point per part.

Question 5 Triangle on the plane (3 points)

(a) A and B share $y = -3$: $4 + 2 =$ **6 units**.

(b) B and C share $x = 2$: $3 + 2 =$ **5 units**.

(c) Flip each x-coordinate: **$(4, -3)$, $(-2, -3)$, $(-2, 2)$.**



Triangle ABC (solid) and its reflection across the y-axis.

Scoring: 1 point per part.

Question 6 Camp map (3 points)

- (a) Same $x = -6$: $3 + 5 = \mathbf{8 \text{ blocks}}$.
- (b) Same $y = 5$: $6 + 4 = \mathbf{10 \text{ blocks}}$.
- (c) $8 + 10 = \mathbf{18 \text{ blocks}}$.

Scoring: 1 point per part.

Question 7 Missing coordinates (2 points)

- (a) The x-coordinate changes sign: $\mathbf{a = -7}$.
- (b) The fourth vertex has $x = 2$ and $y = -5$: $\mathbf{(2, -5)}$.

Scoring: 1 point per part.

Question 8 Decimal coordinates (3 points)

- (a) $-$ and $+$: **Quadrant II**.
- (b) $\mathbf{(-1.5, -2.5)}$.
- (c) $\mathbf{(1.5, 2.5)}$.

Scoring: 1 point per part.

Question 9 Order matters (1 point)

The first number is the horizontal move and the second is the vertical move. $(11, -3)$ is 11 right and 3 down in Quadrant IV; $(-3, 11)$ is 3 left and 11 up in Quadrant II.

Scoring: 1 point for a correct explanation that order or location differs.