

Grade 6 · The Coordinate Plane · Quiz

Common Core 6.NS.C.6b, 6.NS.C.6c, 6.NS.C.8, 6.G.A.3 · mathovore.fr

Name: _____ Date: ____/____/____ Score: _____

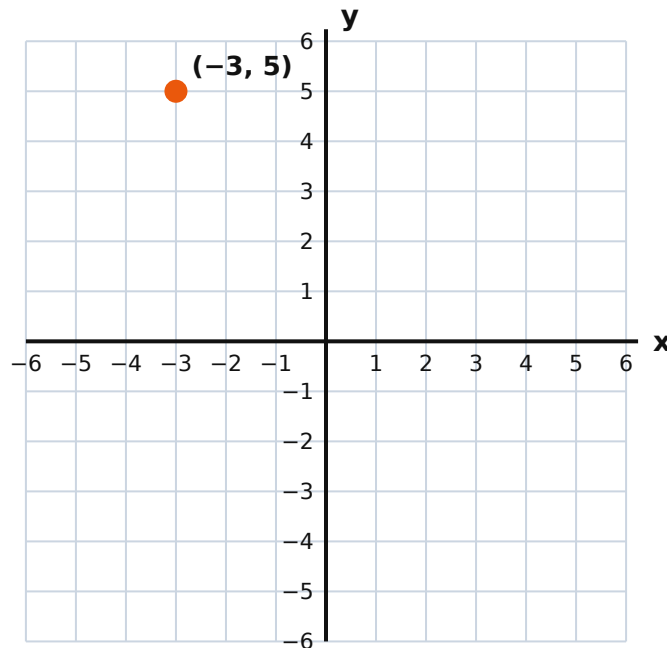
This 10-question multiple-choice quiz checks coordinate plane skills from Common Core 6.NS.C.6, 6.NS.C.8, and 6.G.A.3. Choose one answer for each question. The explanation after each question shows the right reasoning and the usual sign mistake.

Grade 6 Common Core: 6.NS.C.6b · 6.NS.C.6c · 6.NS.C.8 · 6.G.A.3

Questions

Question 1

In which quadrant is the point $(-3, 5)$?



The point $(-3, 5)$.

- A. Quadrant II
- B. Quadrant I
- C. Quadrant III
- D. Quadrant IV

Question 2

Which point lies on the x-axis?

- A. $(0,4)$
- B. $(4,0)$
- C. $(3,3)$
- D. $(-2,-2)$

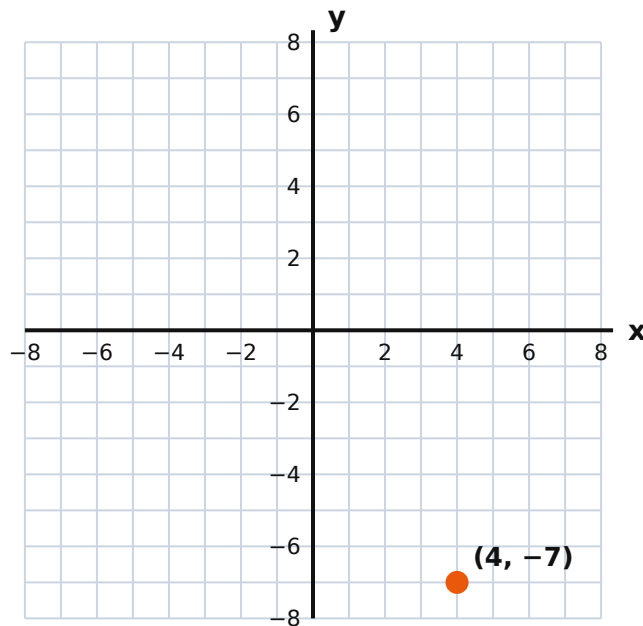
Question 3

How do you plot the point $(-2,6)$ starting at the origin?

- A. Right 2, then up 6
- B. Left 6, then up 2
- C. Up 2, then left 6
- D. Left 2, then up 6

Question 4

What are the coordinates of the reflection of $(4,-7)$ across the x-axis?



The point $(4,-7)$.

- A. $(-4,-7)$
- B. $(-4,7)$
- C. $(7,-4)$
- D. $(4,7)$

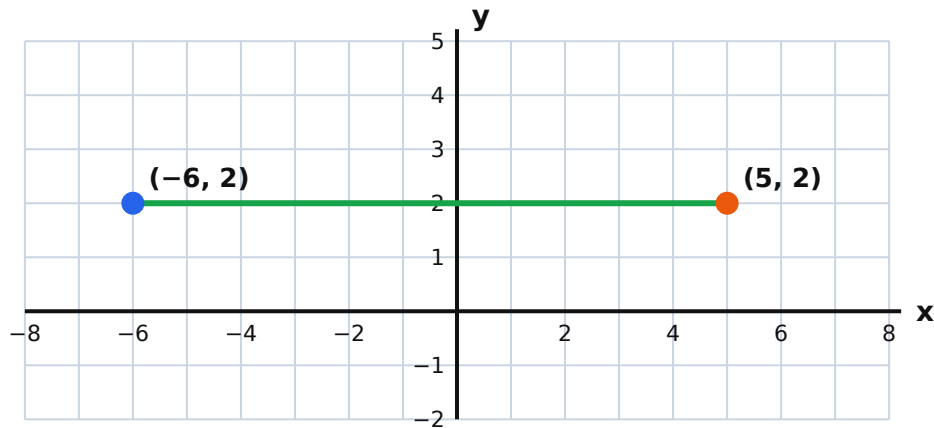
Question 5

What are the coordinates of the reflection of $(-3,8)$ across the y-axis?

- A. $(-3, -8)$
- B. $(3, -8)$
- C. $(3, 8)$
- D. $(8, -3)$

Question 6

What is the distance between $(-6, 2)$ and $(5, 2)$?



Two points with the same y-coordinate.

- A. 1 unit
- B. 7 units
- C. 11 units
- D. 13 units

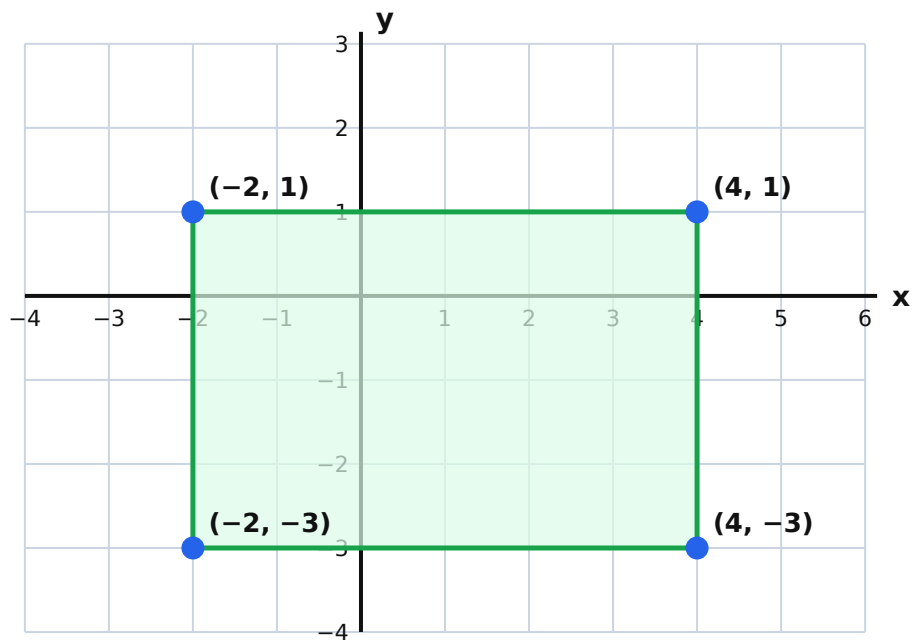
Question 7

What is the distance between $(3, -9)$ and $(3, -4)$?

- A. 5 units
- B. 13 units
- C. 12 units
- D. 7 units

Question 8

A rectangle has vertices $(-2, 1)$, $(4, 1)$, $(4, -3)$, and $(-2, -3)$. What is its perimeter?



The rectangle.

- A. 10 units
- B. 20 units
- C. 24 units
- D. 14 units

Question 9

A point is reflected across the y-axis and lands at $(-5, -5)$. What were its original coordinates?

- A. $(-5, 5)$
- B. $(5, 5)$
- C. $(-5, -5)$
- D. $(5, -5)$

Question 10

In which quadrant are both coordinates negative?

- A. Quadrant I
- B. Quadrant II
- C. Quadrant III
- D. Quadrant IV

Answer key

1. **A** – The x -coordinate is negative, so the point is left of the y -axis, and the y -coordinate is positive, so it is above the x -axis. That is Quadrant II.
2. **B** – A point on the x -axis has $y=0$. The point $(0,4)$ is on the y -axis, where $x=0$.
3. **D** – The first number is the horizontal move and the second is the vertical move. The negative x means left, and the positive y means up.
4. **D** – A reflection across the x -axis changes only the sign of the y -coordinate. Changing the x -coordinate would reflect across the y -axis instead.
5. **C** – A reflection across the y -axis changes only the sign of the x -coordinate: $(-3,8)$ becomes $(3,8)$.
6. **C** – The y -coordinates are equal. The x -coordinates are on opposite sides of 0, so add the absolute values: $6+5=11$. Subtracting gives 1, which is a common mistake.
7. **A** – The x -coordinates are equal. Both y -coordinates are negative, so they are on the same side of 0 and you subtract the absolute values: $9-4=5$.
8. **B** – The sides are $2+4=6$ and $1+3=4$, so the perimeter is $2(6+4)=20$. The number 24 is the area, not the perimeter.
9. **D** – Reflecting across the y -axis changes the sign of x . Undoing it changes $x=-5$ back to 5, and y stays -5 .
10. **C** – Negative x puts the point left of the y -axis and negative y puts it below the x -axis. That is Quadrant III.

Remember:

- An ordered pair (x,y) gives the horizontal move first and the vertical move second.
- The signs of the coordinates tell the quadrant: Quadrant I is $(+,+)$ and Quadrant III is $(-,-)$.
- Reflecting across the x -axis changes the sign of y ; across the y -axis it changes the sign of x .
- For points with the same x or y , add absolute values on opposite sides of 0 and subtract on the same side.
- A polygon is drawn by plotting its vertices and connecting them in order.