

Grade 8 - Distance on the Coordinate Plane - Quiz

Common Core 8.G.B.8 · maths-pdf.fr/en/

Name: _____ Class: _____ Date: ____/____/____

Pick the best answer for each of the 10 questions about the distance formula on the coordinate plane, perimeters of figures and map problems (Common Core 8.G.B.8). Read each question carefully, then read the explanation to learn from any mistake.

Grade 8 · Common Core State Standards: **8.G.B.8**

Questions

Question 1

What is the distance between $(0,0)$ and $(8,15)$?

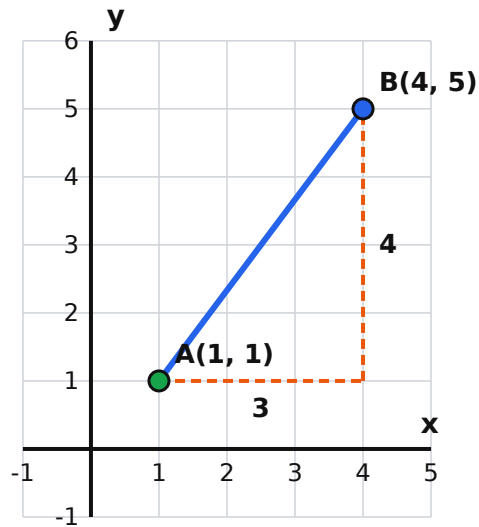
- A. 23
- B. 17
- C. 7
- D. 120

Question 2

What is the distance between $(-2,1)$ and $(4,9)$?

- A. 14
- B. 8
- C. 10
- D. 100

Question 3



Find AB.

What is the length of segment AB?

- A. 5
- B. 7
- C. 4
- D. 25

Question 4

Which distance formula is correct?

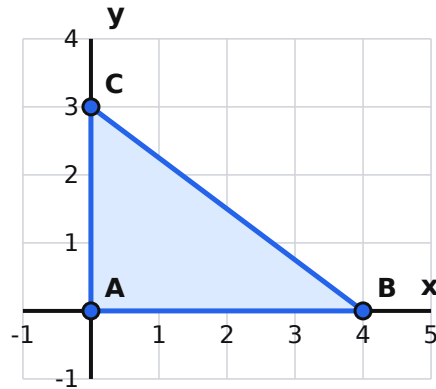
- A. $d = (x_2 - x_1) + (y_2 - y_1)$
- B. $d = \sqrt{x_2 - x_1} + \sqrt{y_2 - y_1}$
- C. $d = (x_2 - x_1)^2 + (y_2 - y_1)^2$
- D. $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

Question 5

What is the distance between $(3, -2)$ and $(3, 7)$?

- A. 9
- B. 5
- C. 10
- D. 81

Question 6



Triangle ABC.

What is the perimeter of triangle ABC?

- A. 12
- B. 7
- C. 10
- D. 5

Question 7

The distance from the origin to $(x,24)$ is 25 with $x > 0$. What is x ?

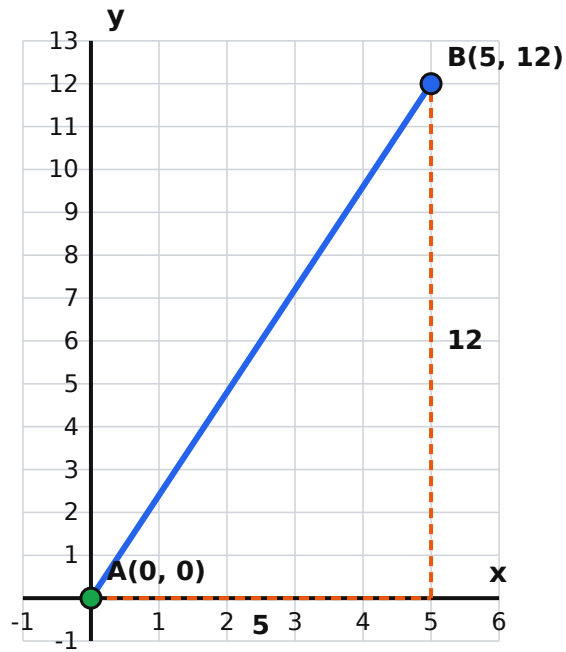
- A. 1
- B. 49
- C. 7
- D. 5

Question 8

Which point is closest to the origin?

- A. (6,5)
- B. (5,5)
- C. (1,8)
- D. (7,3)

Question 9



Distance in miles.

A drone flies from A to B. Each grid unit is 1 mile. How far does it fly?

- A. 17 miles
- B. 7 miles
- C. 60 miles
- D. 13 miles

Question 10

The distance formula comes from

- A. the area of a circle
- B. the Pythagorean theorem
- C. the slope formula
- D. the angle sum of a triangle

Answers

1. **B** - $64 + 225 = 289$, so the distance is 17.
2. **C** - Legs 6 and 8, hypotenuse 10.
3. **A** - Legs 3 and 4 give 5.
4. **D** - The sum of the squares must be under a square root.
5. **A** - The x-coordinates match, so subtract y values: $7 - (-2) = 9$.
6. **A** - $3 + 4 + 5 = 12$.
7. **C** - $x^2 + 576 = 625$, so $x^2 = 49$.
8. **B** - (5,5) gives 50; (6,5) gives 61; (1,8) gives 65; (7,3) gives 58.
9. **D** - Legs 5 and 12 give hypotenuse 13.
10. **B** - The legs are the changes in x and y.

Remember

- Distance: $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$.
- The horizontal and vertical changes are the legs of a right triangle.
- For horizontal or vertical segments, just subtract coordinates.
- Perimeter: find each side with the distance formula and add.
- Distances can be whole numbers or square roots to estimate.