

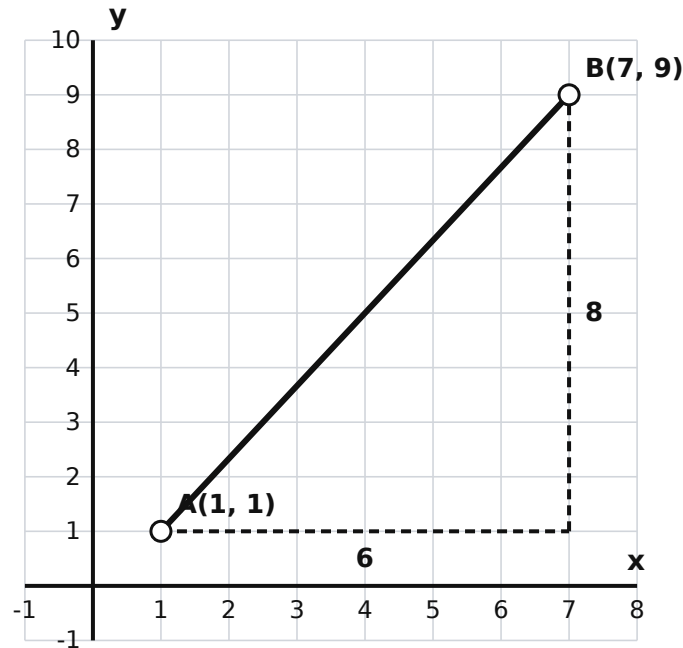
Grade 8 - Distance on the Coordinate Plane - Test Answer Key

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

Use this answer key to score the distance on the coordinate plane test out of 20 points. Each solution shows the full work and a scoring guide, so partial credit can be given fairly when a student shows correct steps but makes an arithmetic slip.

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

Question 1 - Distance [3 pts]



$$AB = 10.$$

Legs: 6 and 8; $\sqrt{36+64} = 10$.

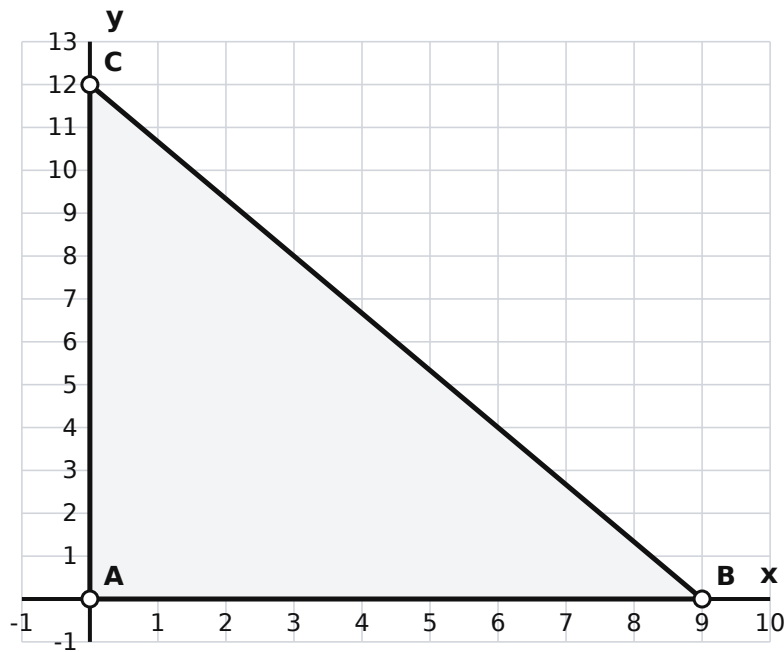
Scoring: 1 point for the legs, 1 point for the equation, 1 point for 10.

Question 2 - Estimate [2 pts]

Legs: 5 and 3. $\sqrt{25+9} = \sqrt{34} \approx 5.8$.

Scoring: 1 point for the equation. 1 point for 5.8.

Question 3 - Perimeter [3 pts]



$$BC = 15.$$

$$AB = 9, AC = 12, BC = 15. \text{ Perimeter: } 36.$$

Scoring: 1 point for BC, 1 point for the sides, 1 point for 36.

Question 4 - Right triangle? [3 pts]

Sides: 5, 12 and $\sqrt{25+144}=13$. The horizontal and vertical sides meet at (5,0) at a right angle: yes.

Scoring: 1 point for the legs 5 and 12, 1 point for the hypotenuse 13, 1 point for yes with a reason.

Question 5 - Missing coordinate [2 pts]

$$x^2+144=169, \text{ so } x^2=25 \text{ and } x=5.$$

Scoring: 1 point for the equation. 1 point for 5.

Question 6 - Map problem [3 pts]

$d = \sqrt{225+64} = 17$. Streets: $15+8 = 23$. Difference: 6 blocks.

Scoring: 1 point for the legs, 1 point for 17, 1 point for 6 blocks.

Question 7 - Compare distances [2 pts]

$\sqrt{100} = 10$ and $\sqrt{98} \approx 9.9$. So (6,8) is farther.

Scoring: 1 point for each distance or squared distance, 1 point for the conclusion (2 points total).

Question 8 - Explain [2 pts]

A horizontal segment has no vertical change, so its length is the horizontal change. A slanted segment is the hypotenuse of a right triangle and needs the Pythagorean theorem.

Scoring: 1 point for each part.

Total
20 points