

Geometry · Points, Lines, Planes, Segments and Angles · Quiz

Common Core G-CO.A.1 · mathovore.fr

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

Ten multiple-choice questions check definitions, segment addition, midpoints, angle addition and angle pairs (G-CO.A.1). Pick the single best answer, then read the explanation to catch common mistakes.

GeometryCommon Core: G-CO.A.1

Questions

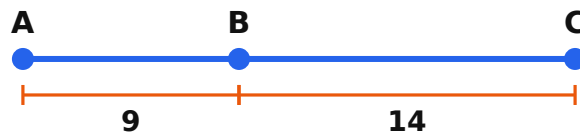
Question 1

Which of these is an undefined term in geometry?

- A. Ray
- B. Angle
- C. Midpoint
- D. Point

Question 2

B is between A and C. What is AC?



$AB = 9$ and $BC = 14$.

- A. $AC = 23$
- B. $AC = 5$
- C. $AC = 24$
- D. $AC = 126$

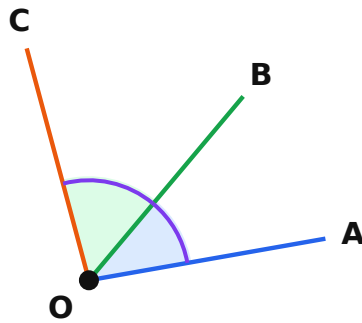
Question 3

M is the midpoint of $\overline{PQ}$. If $PM = 15$, what is PQ?

- A. $PQ = 15$
- B. $PQ = 30$
- C. $PQ = 7.5$
- D. $PQ = 45$

Question 4

Ray OB is inside $\angle AOC$. What is $m\angle AOC$?



$m\angle AOB = 40^\circ$ and $m\angle BOC = 55^\circ$.

- A. 95°
- B. 15°
- C. 85°
- D. 105°

Question 5

What is the complement of a 71° angle?

- A. 109°
- B. 29°
- C. 71°
- D. 19°

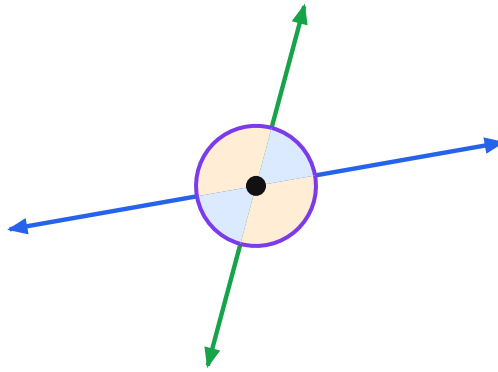
Question 6

What is the supplement of a 128° angle?

- A. 38°
- B. 62°
- C. 232°
- D. 52°

Question 7

Two lines intersect. What is the measure of the angle vertical to the 65° angle?



The angle marked ? is opposite the 65° angle.

- A. 65°
- B. 115°
- C. 25°
- D. 295°

Question 8

Two angles form a linear pair. One angle is twice the other. What is the measure of the larger angle?

- A. 60°
- B. 90°
- C. 120°
- D. 100°

Question 9

Which statement describes a circle?

- A. All points in space at a given distance from a center point
- B. All points in a plane equidistant from two given points
- C. All points in a plane at a given distance from a center point
- D. All points on a line at a given distance from a point

Question 10

Which statement is true about perpendicular lines?

- A. They lie in one plane and never intersect
- B. They intersect to form four right angles
- C. They intersect to form angles of 60° and 120°
- D. They intersect to form four angles of 45°

Answer key

1. **D** – Point, line and plane are undefined terms. Rays, angles and midpoints are defined using them.
2. **A** – Segment Addition Postulate: $9 + 14 = 23$. Subtracting gives 5, which is a common slip.
3. **B** – A midpoint splits the segment into two equal parts, so $PQ = 15 + 15 = 30$.
4. **A** – Angle Addition Postulate: $40 + 55 = 95$.
5. **D** – Complementary angles add to 90, so $90 - 71 = 19$. Using 180 gives 109, the supplement.
6. **D** – Supplementary angles add to 180, so $180 - 128 = 52$. Using 90 gives 38, the complement.
7. **A** – Vertical angles are congruent, so the measure is 65. A neighbor on the same line would be 115.
8. **C** – The angles add to 180: $x + 2x = 180$, so $x = 60$ and the larger angle is 120.
9. **C** – A circle lies in a plane and has a center. Points in space at a fixed distance form a sphere.
10. **B** – Perpendicular lines meet at a right angle, so all four angles are 90° . Lines that never meet are parallel.

Remember:

- Point, line and plane are undefined terms; all other figures are defined from them.
- Segment Addition Postulate: if B is between A and C, then $AB + BC = AC$.
- Angle Addition Postulate: if D is inside angle ABC, the two smaller angles add to angle ABC.
- Complementary angles add to 90 degrees; supplementary angles and linear pairs add to 180 degrees.
- Vertical angles are congruent.