

Geometry: Transformations and Law of Cosines

Mathematics · Practice Test · 10 Questions

1. What is the standard form of the Law of Cosines to find side a?

- A) $a^2 = b^2 + c^2 - 2bc \cos A$
- B) $a^2 = b^2 + c^2 + 2bc \cos A$
- C) $a^2 = b^2 - c^2 - 2bc \cos A$
- D) $a^2 = c^2 - b^2 - 2bc \cos A$

2. In geometry, what is the movement of a figure in the Cartesian plane called?

- A) Reflection
- B) Rotation
- C) Transformation
- D) Translation

3. Which transformation slides a figure without turning or flipping it?

- A) Rotation
- B) Reflection
- C) Translation
- D) Dilation

4. What is the general coordinate rule for a translation of a point $P(x, y)$?

- A) $P'(x-a, y-b)$
- B) $P'(x+a, y+b)$
- C) $P'(ax, by)$
- D) $P'(x/a, y/b)$

5. What is the formal definition of reflection in geometry?

- A) Turning a figure
- B) Flipping a figure over a line
- C) Sliding a figure
- D) Resizing a figure

6. What is the term for the initial image before a transformation occurs?

- A) Final image
- B) Reflection
- C) Pre-image
- D) Coordinate

7. What is the coordinate rule for rotating a point 90 degrees counterclockwise about the origin?

- A) $(x, y) \rightarrow (y, -x)$
- B) $(x, y) \rightarrow (-y, x)$
- C) $(x, y) \rightarrow (-x, -y)$
- D) $(x, y) \rightarrow (x, -y)$

8. What is the coordinate rule for rotating a point 180 degrees about the origin?

- A) $(x, y) \rightarrow (-x, -y)$
- B) $(x, y) \rightarrow (-y, x)$
- C) $(x, y) \rightarrow (y, x)$
- D) $(x, y) \rightarrow (x, -y)$

9. What is the coordinate rule for rotating a point 270 degrees counterclockwise about the origin?

- A) $(x, y) \rightarrow (-y, x)$
- B) $(x, y) \rightarrow (y, -x)$
- C) $(x, y) \rightarrow (-x, y)$
- D) $(x, y) \rightarrow (x, y)$

10. What is the fixed point around which a figure is turned during rotation called?

- A) Origin
- B) Center of rotation
- C) Vertex
- D) Midpoint