PEP Grade 9 Math — Unit 23: Rotation • Unit Test (Basic)

PEP · Grade 9 · Term 1 · Mathematics · Unit Test · Basic

AI-generated practice paper · original study aid, not an official examination paper · 40 questions · 100 points

Name: _____ Date: _____ Score: _____

Answer all questions. This paper is worth 100 points. Show your working where appropriate.

I. Multiple Choice

1. Which of the following describes a rotation in the plane?
   A. Moving every point the same distance in one direction
   B. Turning a figure around a fixed point by a certain angle
   C. Flipping a figure over a line
   D. Stretching a shape uniformly in all directions

2. What is the image of point (2, -3) after a 90° clockwise rotation about the origin?
   A. (3, 2)
   B. (-3, -2)
   C. (-2, 3)
   D. (3, -2)

3. After a 180° rotation about the origin, which point maps to (4, -5)?
   A. (-4, 5)
   B. (5, -4)
   C. (4, 5)
   D. (-5, 4)

4. If triangle ABC is rotated 90° counterclockwise about the origin, what happens to its orientation?
   A. It becomes larger
   B. Its side lengths change
   C. It remains congruent but faces a new direction
   D. It flips horizontally

5. Which transformation is NOT an isometry?
   A. Rotation
   B. Reflection
   C. Translation
   D. Dilation

6. A square has vertices at (1, 1), (1, 3), (3, 3), and (3, 1). After a 90° counterclockwise rotation about the origin, what is the new position of (1, 1)?
   A. (-1, 1)
   B. (1, -1)
   C. (-1, -1)
   D. (1, 1)

7. What is the angle of rotation that maps point (3, 4) to (-4, 3) about the origin?
   A. 90° clockwise
   B. 90° counterclockwise
   C. 180°
   D. 270° clockwise

8. Which of the following figures has rotational symmetry of order 2?
   A. Equilateral triangle
   B. Rectangle (not square)
   C. Regular pentagon
   D. Circle

9. If a figure is rotated 270° clockwise about the origin, what is the equivalent counterclockwise rotation?