Geometry Practice: G.G.54 #11

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NAME:_____

P.I. G.G.54: Define, investigate, justify, and apply isometries in the plane (rotations, reflection, translations, glide reflections)

1. Identify the coordinates of the point (9, –8) under a rotation of $90°$ clockwise about the origin.

   [A] (9, 8) [B] (–9, 8)

   [C] (–8, –9) [D] (–9, –8)

2. Find the coordinates of the image of a triangle with vertices $A(0, 1)$, $B(-6, 0)$, and $C(3, -2)$ under a rotation of $90°$ counterclockwise about the origin.

3. Find the coordinates of the image of a triangle with vertices $A(0, -3)$, $B(3, 0)$, and $C(-7, 4)$ under a rotation of $90°$ clockwise about the origin.

4. Identify the coordinates of the point (2, 4) under a rotation of $180°$ clockwise about the origin.

   [A] (–2, 4) [B] (2, –4)

   [C] (–2, –4) [D] (4, 2)

5. Identify the coordinates of the point (–6, 5) under a rotation of $180°$ clockwise about the origin.

   [A] (6, 5) [B] (–6, –5)

   [C] (5, –6) [D] (6, –5)

6. Find the coordinates of the image of a triangle with vertices $A(0, 7)$, $B(9, 0)$, and $C(-9, 1)$ under a rotation of $90°$ clockwise about the origin.

7. Identify the coordinates of the point (3, 7) under a rotation of $90°$ clockwise about the origin.

   [A] (–3, –7) [B] (7, –3)

   [C] (3, –7) [D] (–3, 7)

8. Find the coordinates of the image of a triangle with vertices $A(0, -6)$, $B(8, 0)$, and $C(5, -9)$ under a rotation of $90°$ counterclockwise about the origin.

9. Find the coordinates of the image of a triangle with vertices $A(0, 9)$, $B(-4, 0)$, and $C(2, 3)$ under a rotation of $90°$ clockwise about the origin.

10. Identify the coordinates of the point (–10, 4) under a rotation of $180°$ clockwise about the origin.

    [A] (10, 4) [B] (10, –4)

    [C] (–10, –4) [D] (4, –10)

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[1] C

[2] $A'(-1, 0)$, $B'(0, -6)$, $C'(2, 3)$

[3] $A'(-3, 0)$, $B'(0, -3)$, $C'(4, 7)$

[4] C

[5] D

[6] $A'(7, 0)$, $B'(0, -9)$, $C'(1, 9)$

[7] B

[8] $A'(6, 0)$, $B'(0, 8)$, $C'(9, 5)$

[9] $A'(9, 0)$, $B'(0, 4)$, $C'(3, -2)$

[10] B