

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

1. A point  $P$  has coordinates  $(-4, 7)$ . What are its new coordinates after reflecting point  $P$  in the  $x$ -axis?

[A]  $(-4, -7)$                       [B]  $(-4, 7)$   
[C]  $(4, -7)$                       [D]  $(4, 7)$

2. A point  $P$  has coordinates  $(-1, -8)$ . What are its new coordinates after reflecting point  $P$  in the  $y$ -axis?

[A]  $(1, 8)$                       [B]  $(1, -8)$   
[C]  $(-1, 8)$                       [D]  $(-1, -8)$

3. A point  $P$  has coordinates  $(2, -3)$ . What are its new coordinates after reflecting point  $P$  in the  $y$ -axis?

[A]  $(2, -3)$                       [B]  $(2, 3)$   
[C]  $(-2, -3)$                       [D]  $(-2, 3)$

4. A point  $P$  has coordinates  $(5, -6)$ . What are its new coordinates after reflecting point  $P$  in the  $x$ -axis?

[A]  $(5, -6)$                       [B]  $(-5, -6)$   
[C]  $(5, 6)$                       [D]  $(-5, 6)$

5. A point  $P$  has coordinates  $(-2, 7)$ . What are its new coordinates after reflecting point  $P$  in the  $x$ -axis?

[A]  $(2, -7)$                       [B]  $(-2, 7)$   
[C]  $(-2, -7)$                       [D]  $(2, 7)$

6. What are the coordinates of the reflection image of  $P(7, 3)$  in the  $y$ -axis?

7. What are the coordinates of the reflection image of  $P(-6, 2)$  in the  $y$ -axis?

8. What are the coordinates of the reflection image of  $P(-5, -6)$  in the  $x$ -axis?

9. What are the coordinates of the reflection image of  $P(-8, -1)$  in the  $x$ -axis?

10. What are the coordinates of the reflection image of  $P(-2, -5)$  in the  $y$ -axis?

Geometry Practice: G.G.54 #7

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[1] A

[2] B

[3] C

[4] C

[5] C

[6]  $(-7, 3)$

[7]  $(6, 2)$

[8]  $(-5, 6)$

[9]  $(-8, 1)$

[10]  $(2, -5)$