

Reflections

$$\begin{aligned}r_{x\text{-axis}}(x, y) &\longrightarrow (x, -y) \\r_{y\text{-axis}}(x, y) &\longrightarrow (-x, y) \\r_{y=x}(x, y) &\longrightarrow (y, x) \\r_{y=-x}(x, y) &\longrightarrow (-y, -x) \\r_{\text{origin}}(x, y) &\longrightarrow ((-x, -y))\end{aligned}$$

Find the following reflections:

1. $r_{x\text{-axis}}(2, 4)$
2. $r_{y\text{-axis}}(4, 5)$
3. $r_{x\text{-axis}}(4, -2)$
4. $r_{y\text{-axis}}(-5, 8)$
5. $r_{y=x}(2, 7)$
6. $r_{y=x}(5, -8)$
7. $r_{\text{origin}}(5, 3)$
8. $r_{\text{origin}}(-5, 4)$
9. $r_{y=-x}(6, 2)$
10. $r_{y=-x}(-6, 10)$
11. $r_{y\text{-axis}}(-5, -4)$
12. $r_{x\text{-axis}}(0, 4)$
13. $r_{y\text{-axis}}(0, 7)$
14. $r_{x\text{-axis}}(4, 0)$
15. $r_{\text{origin}}(0, 8)$
16. $r_{\text{origin}}(-5, 0)$
17. $r_{\text{origin}}(-3, 4)$
18. $r_{y\text{-axis}}(3, -5)$
19. Define a reflection of a Point P in a line j .