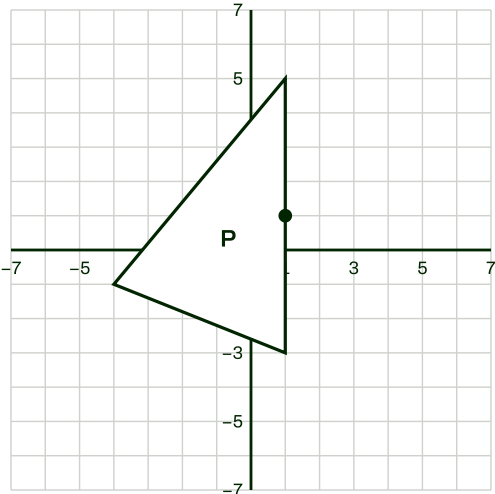


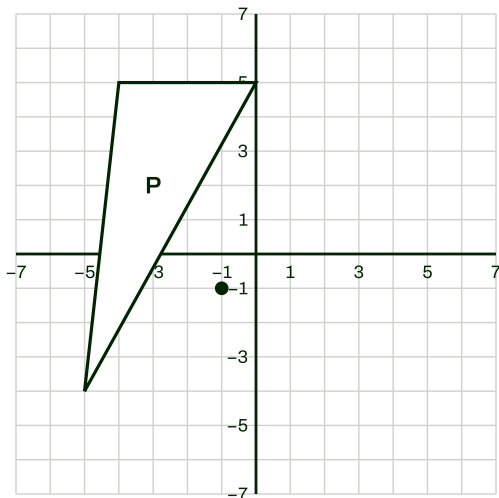
Rotate a figure about a point other than the origin

NAME	DATE	SCORE / 10
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- 1
- Triangle P, with vertices $(1, 5)$, $(1, -3)$ and $(-4, -1)$, and the point $(1, 1)$ are shown on the coordinate plane below. Triangle P is rotated 90° counterclockwise about the point $(1, 1)$. What are the coordinates of the image of the vertex $(-4, -1)$?

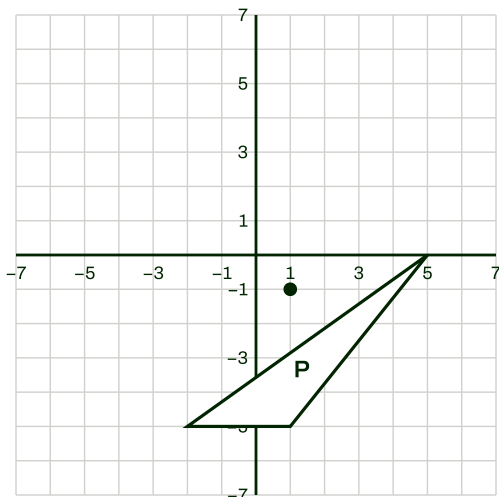


- 2** Triangle P, with vertices $(-4, 5)$, $(-5, -4)$ and $(0, 5)$, and the point $(-1, -1)$ are shown on the coordinate plane below. Triangle P is rotated 180° about the point $(-1, -1)$. Ana says the image of the vertex $(-4, 5)$ is $(4, -5)$. Is Ana right?



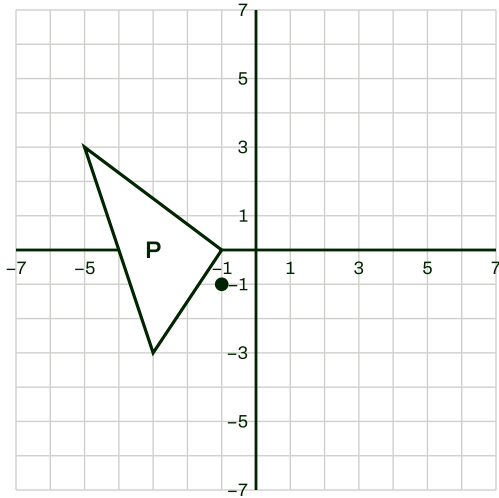
☐ No: the image is $(2, -7)$ ☐ No: the image is $(2, 5)$ ☐ Yes

- 3** Triangle P, with vertices $(5, 0)$, $(-2, -5)$ and $(1, -5)$, and the point $(1, -1)$ are shown on the coordinate plane below. Triangle P is rotated 180° about the point $(1, -1)$. What are the coordinates of the image of the vertex $(-2, -5)$?



4

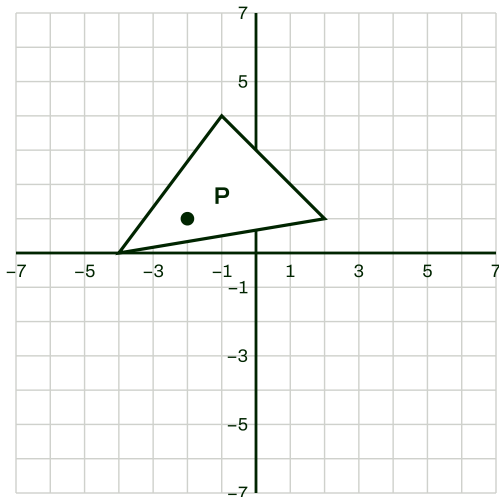
Triangle P, with vertices $(-3, -3)$, $(-5, 3)$ and $(-1, 0)$, and the point $(-1, -1)$ are shown on the coordinate plane below. Triangle P is rotated 90° clockwise about the point $(-1, -1)$. Emma says the image of the vertex $(-3, -3)$ is $(-3, 3)$. Is Emma right?



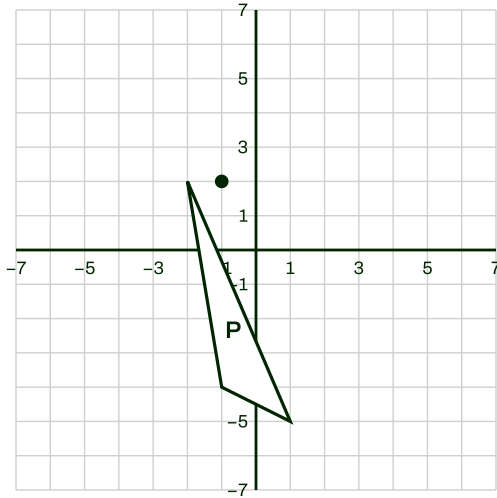
- ☐ Yes
 ☐ No: the image is $(1, -3)$
 ☐ No: the image is $(-3, 1)$

5

Triangle P, with vertices $(-1, 4)$, $(2, 1)$ and $(-4, 0)$, and the point $(-2, 1)$ are shown on the coordinate plane below. Triangle P is rotated 90° clockwise about the point $(-2, 1)$. What are the coordinates of the image of the vertex $(2, 1)$?

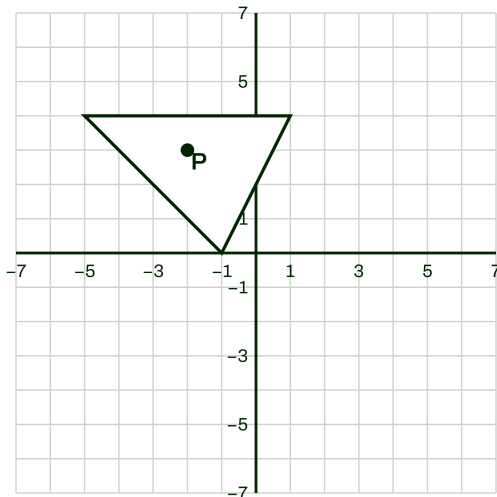


- 6** Triangle P, with vertices $(-2, 2)$, $(1, -5)$ and $(-1, -4)$, and the point $(-1, 2)$ are shown on the coordinate plane below. Triangle P is rotated 90° counterclockwise about the point $(-1, 2)$. Emma says the image of the vertex $(-1, -4)$ is $(5, 2)$. Is Emma right?



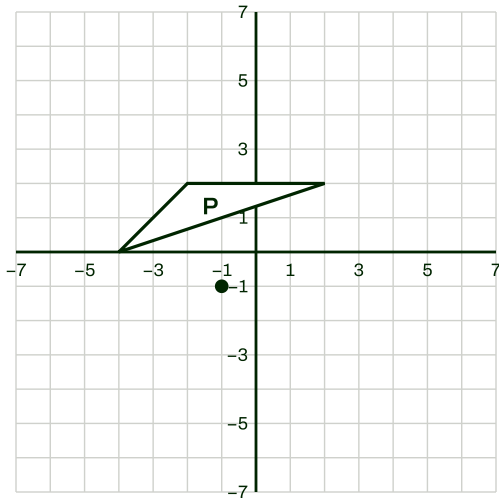
☐ No: the image is $(-7, 2)$ ☐ Yes ☐ No: the image is $(4, -1)$

- 7** Triangle P, with vertices $(1, 4)$, $(-1, 0)$ and $(-5, 4)$, and the point $(-2, 3)$ are shown on the coordinate plane below. Triangle P is rotated 180° about the point $(-2, 3)$. What are the coordinates of the image of the vertex $(1, 4)$?



8

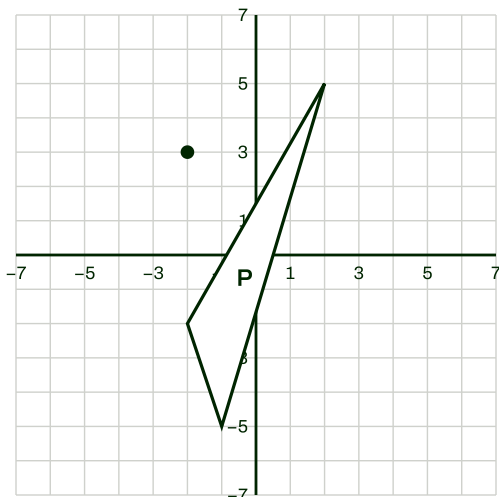
Triangle P, with vertices $(2, 2)$, $(-2, 2)$ and $(-4, 0)$, and the point $(-1, -1)$ are shown on the coordinate plane below. Triangle P is rotated 180° about the point $(-1, -1)$. Ivy says the image of the vertex $(2, 2)$ is $(-2, -2)$. Is Ivy right?



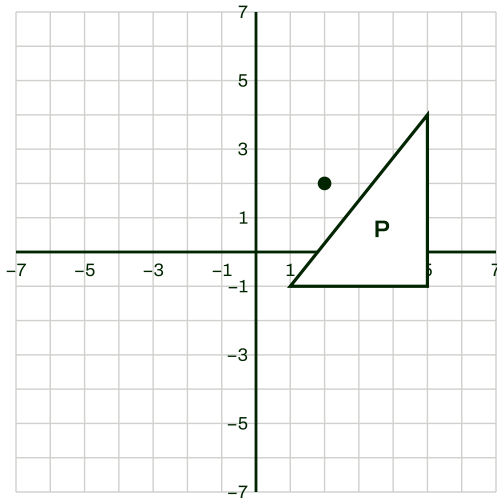
- ☐ Yes
 ☐ No: the image is $(-4, -4)$
 ☐ No: the image is $(-4, 2)$

9

Triangle P, with vertices $(-2, -2)$, $(-1, -5)$ and $(2, 5)$, and the point $(-2, 3)$ are shown on the coordinate plane below. Triangle P is rotated 90° counterclockwise about the point $(-2, 3)$. What are the coordinates of the image of the vertex $(-2, -2)$?



- 10** Triangle P, with vertices $(5, -1)$, $(1, -1)$ and $(5, 4)$, and the point $(2, 2)$ are shown on the coordinate plane below. Triangle P is rotated 90° counterclockwise about the point $(2, 2)$. Leo says the image of the vertex $(5, -1)$ is $(1, 5)$. Is Leo right?



- ☐ Yes
 ☐ No: the image is $(5, 5)$
 ☐ No: the image is $(-1, -1)$

Rotate a figure about a point other than the origin

1 (3, -4)

3 (4, 3)

5 (-2, -3)

7 (-5, 2)

9 (3, 3)

2 No: the image is (2, -7)

4 No: the image is (-3, 1)

6 Yes

8 No: the image is (-4, -4)

10 No: the image is (5, 5)