



## Rotations

Triangle  $XYZ$  has vertices  $X(4, -4)$ ,  $Y(6, -2)$ , and  $Z(7, -4)$ . Graph  $\triangle XYZ$  and its image after a rotation  $90^\circ$  counterclockwise about  $(3, 0)$ .

Predict where  $\triangle X'Y'Z'$  will be located after the rotation.

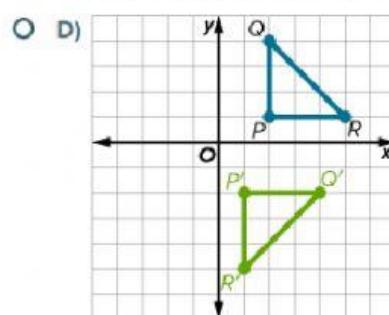
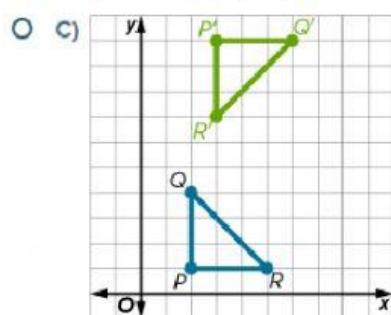
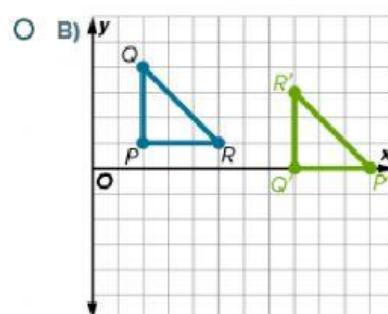
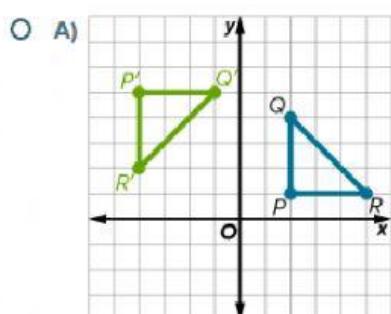
A Quadrant I

B Quadrant II

C Quadrant III

D Quadrant IV

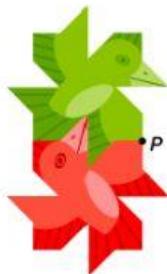
Triangle  $PQR$  has vertices  $P(2, 1)$ ,  $Q(2, 4)$ , and  $R(5, 1)$ . Select the correct graph of  $\triangle PQR$  and its image after a rotation  $270^\circ$  counterclockwise about  $(7, 5)$ .



عزيزي الطالب : أولاً اجتهد في فهم و مذاكرة تمارين الكتاب ( الكتاب أولاً ) . تمهيلي للجميع بالنجاح والتوفيق



**TESSELLATIONS** Ernesto is trying to create a tessellation for a project in his art class. A tessellation is a pattern of one or more figures that covers a plane so that there are no overlapping or empty spaces. Describe the position and orientation of the green bird after it is rotated  $180^\circ$  about point  $P$ .



- A) The green bird would be upright and to the right of the red bird.
- B) The green bird would be facing left and to the right of the red bird.
- C) The green bird would be facing right and to the left of the original green bird.
- D) The green bird would be upside down and to the right of the red bird.

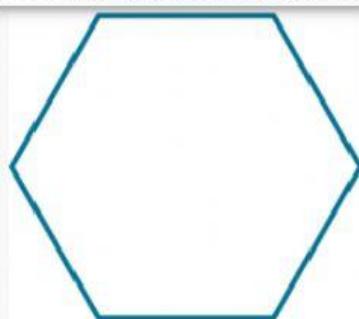
## Symmetry

Determine whether each figure has line symmetry. Write yes or no. If so, state the number of lines of symmetry.



- A yes; 1
- B yes; 2
- C yes; 4
- D no

Determine whether each figure has line symmetry. Write yes or no. If so, state the number of lines of symmetry.



- A yes; 1
- B yes; 3
- C yes; 6
- D no

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