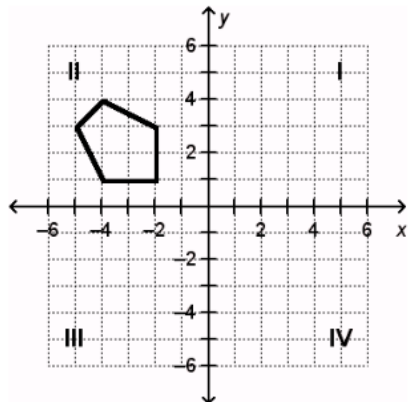


- 8) A figure lies in Quadrant II of a coordinate plane. The figure is transformed by first reflecting across the x -axis and then rotating 90° clockwise about the origin. In what quadrant will the image lie?



- Ⓐ Quadrant I
 Ⓑ Quadrant II
 Ⓒ Quadrant III
 Ⓓ Quadrant IV

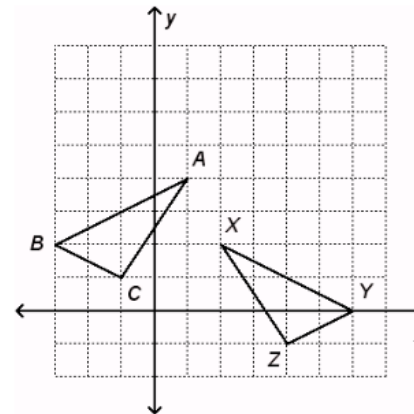
- 11) Given: $\overline{AB} \cong \overline{AC}$, M is the midpoint of \overline{BC}
 Prove: $\angle B \cong \angle C$

- ___ 3. $\overline{AB} \cong \overline{AC}$
 ___ 4. $\overline{BM} \cong \overline{MC}$
 ___ 5. $\overline{AM} \cong \overline{AM}$
 ___ 6. $\triangle ABM \cong \triangle ACM$
 ___ 7. $\angle B \cong \angle C$

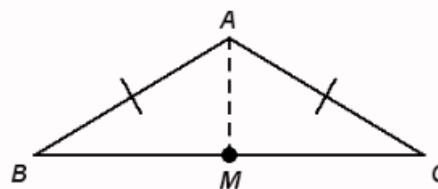
- 9) If $\triangle TRI \cong \triangle ANG$, which of the following congruence statements are true?

- Ⓐ $\overline{TR} \cong \overline{AN}$
 Ⓑ $\overline{TI} \cong \overline{AG}$
 Ⓒ $\overline{RI} \cong \overline{NG}$
 Ⓓ $\overline{TI} \cong \overline{NA}$
 Ⓔ $\angle T \cong \angle A$
 Ⓕ $\angle R \cong \angle N$
 Ⓖ $\angle I \cong \angle G$
 Ⓗ $\angle A \cong \angle N$

- 10) In the triangles shown below, $\overline{AB} \cong \overline{XY}$, $\overline{AC} \cong \overline{XZ}$, and $\angle BAC \cong \angle YXZ$. Which rigid motions below may be combined to map $\triangle ABC$ onto $\triangle XYZ$?

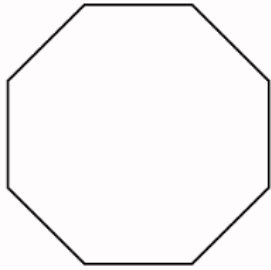


- Ⓐ A reflection across the x -axis
 Ⓑ A reflection across the y -axis
 Ⓒ A reflection across the line $y = x$
 Ⓓ A vertical translation
 Ⓔ A horizontal translation



- Ⓐ Definition of midpoint
 Ⓑ SAS congruence criterion
 Ⓒ Corresponding parts of congruent triangles are congruent.
 Ⓓ SSS congruence criterion
 Ⓔ Definition of perpendicular bisector
 Ⓕ Given
 Ⓖ If a point is on the bisector of an angle, it is equidistant from the sides of the angle.
 Ⓗ Reflexive property of congruence

- 1) What type(s) of symmetry does a regular octagon have? Can be more than one!

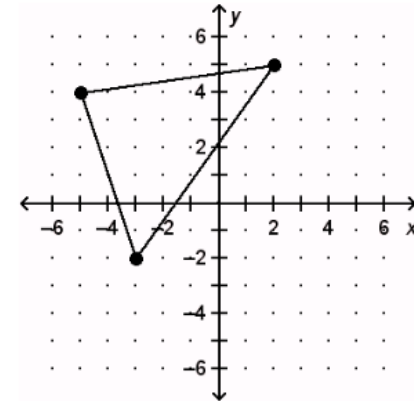


- (A) Line symmetry
- (B) Rotational symmetry; with angles of rotation that are multiples of 30°
- (C) Rotational symmetry; with angles of rotation that are multiples of 45°
- (D) Rotational symmetry; with angles of rotation that are multiples of 60°

- 2) Complete the table, finding the smallest nonzero angle of rotational symmetry for each of the shapes described. Then write a generalization for a regular polygon with n sides.

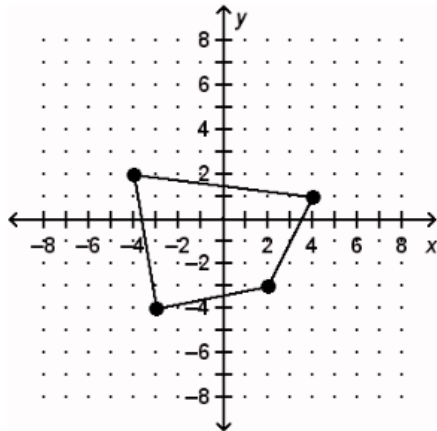
Sides in regular polygon	Angle of rotational symmetry
3	120°
4	
5	
6	

- 3) Which of the following are the vertices of the image of the figure below under the translation $(x, y) \rightarrow (x + 4, y - 2)$?



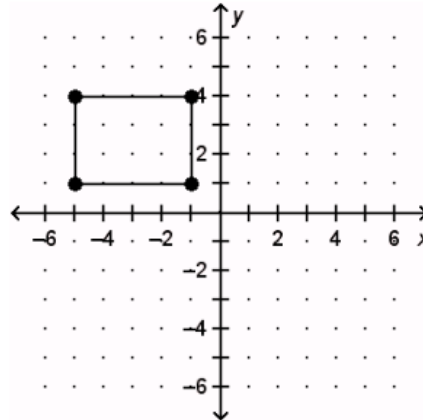
- (A) $(-1, 2)$
- (B) $(-9, 6)$
- (C) $(-2, 7)$
- (D) $(6, 3)$
- (E) $(1, -4)$
- (F) $(-7, 0)$

- 4) What are the vertices of the image of the figure after the translation $(x, y) \rightarrow (x - 2, y + 3)$?



- (A) $(-6, 5), (2, 4), (0, 0), (-5, -1)$
- (B) $(-6, -1), (2, -2), (0, -6), (-5, -7)$
- (C) $(-2, 5), (6, 4), (4, 0), (-1, -1)$
- (D) $(-1, 0), (7, -1), (5, -5), (0, -6)$

- 5) What are the vertices of the image of the rectangle after a 90° counterclockwise rotation about the origin?



- (A) $(5, -4), (1, -4), (1, -1), (5, -1)$
- (B) $(-4, -3), (-4, 1), (-1, 1), (-1, -3)$
- (C) $(4, 5), (4, 1), (1, 1), (1, 5)$
- (D) $(-4, -5), (-4, -1), (-1, -1), (-1, -5)$

- 6) A triangle has vertices $(4, -1), (-3, 0)$, and $(7, 2)$. What are the vertices of the image of the triangle after a reflection across the y -axis?

- (A) $(-4, -1), (3, 0), (-7, 2)$
- (B) $(4, 1), (-3, 0), (7, -2)$
- (C) $(-4, 1), (3, 0), (-7, -2)$
- (D) $(-1, 4), (0, -3), (2, 7)$

- 7) A triangles with vertices $(-3, 1), (1, 5)$, and $(4, 1)$ is reflected across the x -axis. What are the vertices of the image?

- (A) $(1, -3), (5, 1),$ and $(1, 4)$
- (B) $(-3, -1), (1, -5),$ and $(4, -1)$
- (C) $(3, 1), (-1, 5),$ and $(-4, 1)$
- (D) $(-3, -1), (1, 3),$ and $(4, -1)$