Multiple Choice: Show all work for full credit.
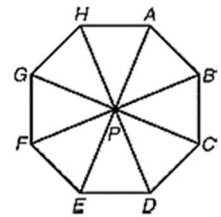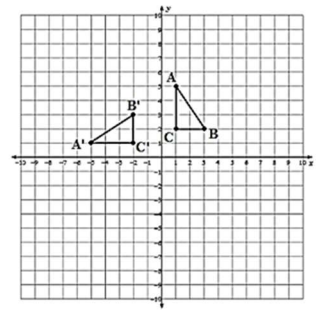
1. Which *clockwise* rotation of the hexagon at right about point P maps point C to point H?

   A. 45°   B. 90°   C. 135°   D. 225°

2. Which describes the rotation that transforms ΔABC on the right to the post-image $\Delta A'B'C'$ on the left?

   A. 270° counterclockwise rotation about the origin.

   B. 180° clockwise rotation about the origin.

   C. 90° counterclockwise rotation about the origin.

   D. 180° counterclockwise about the origin.

3. If the rectangle PQRS is reflected about the line $y = x$, what is the resulting post-image of point P?
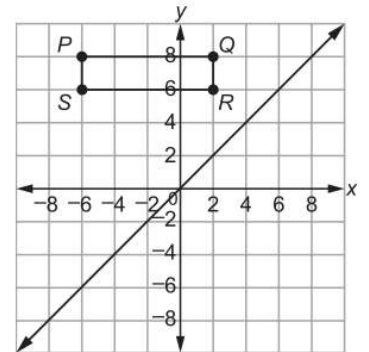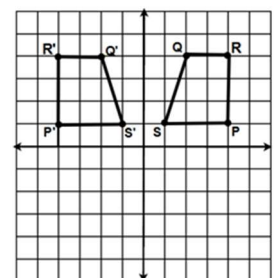
   A. $P'(8, 6)$ B. $P'(8, -6)$

   C. $P'(-8, -6)$ D. $P'(6, -8)$

4. What is the post-image of point T$(-3, 2)$ when translated by $(x - 1, y - 4)$ and reflected about the x-axis?

   A. $T'(-2, -6)$ B. $T'(-2,\ 6)$

   C. $T'(2, 6)$ D. $T'(-4, -2)$

5. Trapezoid $P'Q'R'S'$ on the left is the post-image of trapezoid $PQRS$ on the right. Which of the following is *not true*?

   A. Trapezoid $PQRS$ was reflected over the y-axis to form trapezoid $P'Q'R'S'$.

   B. Trapezoid $PQRS$ is congruent to trapezoid $P'Q'R'S'$.

   C. $\angle Q$ and $\angle Q'$ are congruent angles.

   D. $\overline{QP}$ has the same length as $\overline{R'Q'}$.

12. If $D(-2, -4)$ is reflected about the x-axis, and rotated 90 <u>clockwise</u>, what is the post-image coordinate of D'?

    A. $D'(2, -4)$ B. $D'(4, -2)$

    C. $D'(-2, 4)$ D. $D'(4, 2)$
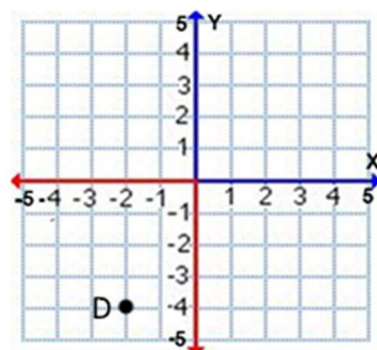
13.   Which of the following is <u>not</u> an isometry which maintains distance and angle measure?

A.   B.   C.   D.

14. What is the line of reflection for a transformation that maps point $Z(2, -1)$ to $Z'(2, 1)$?

    A. The x-axis   B. The y-axis

    B. C. The line y = x   D. The line y = −x

15. Which rotation description maps the figure at right onto itself?

    A.   clockwise 45°
    B.   clockwise 90°
    C.   counterclockwise 180°
    D.   counterclockwise 270°
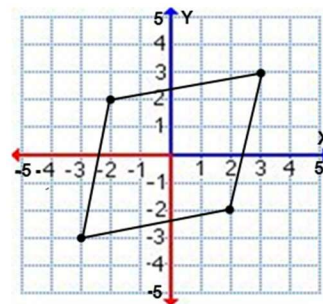
16. The coordinates of ΔLMN are $L(-6, 8), M(-4, 2), N(-10, 4)$. After the transformation $T(x, y) \rightarrow (x + 4, y - 6)$, what are the coordinates of the new figure?

    A. $L'(-2, 2), M'(0, -4), N'(-5, -2)$ B. $L'(-2, 2), M'(1, -4), N'(-6, -2)$

    C. $L'(-2, 2), M'(-4, 0), N'(-2, -6)$ D. $L'(-2, 2), M'(0, -4), N'(-6, -2)$