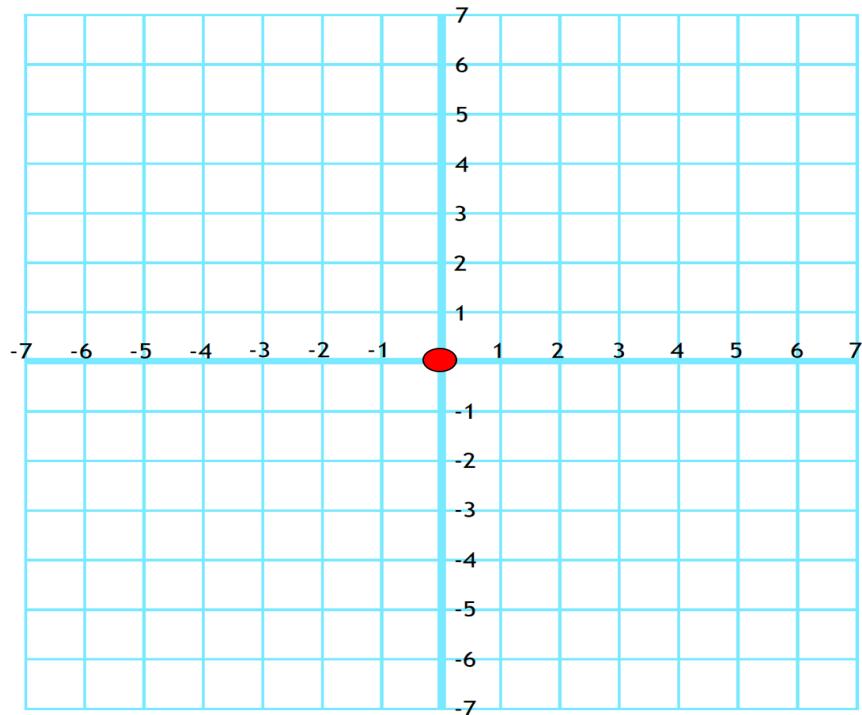


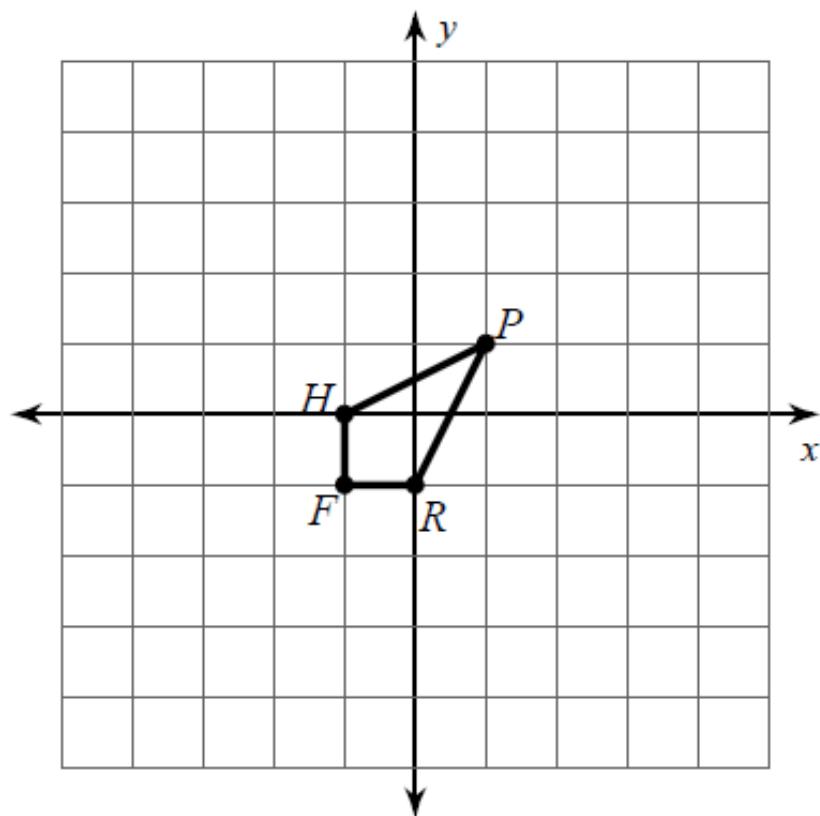
Suppose a pentagon with the vertices $(-1, 7)$, $(2, 5)$, $(5, 2)$, $(4, -3)$, and $(0, -5)$ were translated 4 units to the left. Which of these would be a vertex of the translated figure? Select three that apply. Circle the letter of each answer.

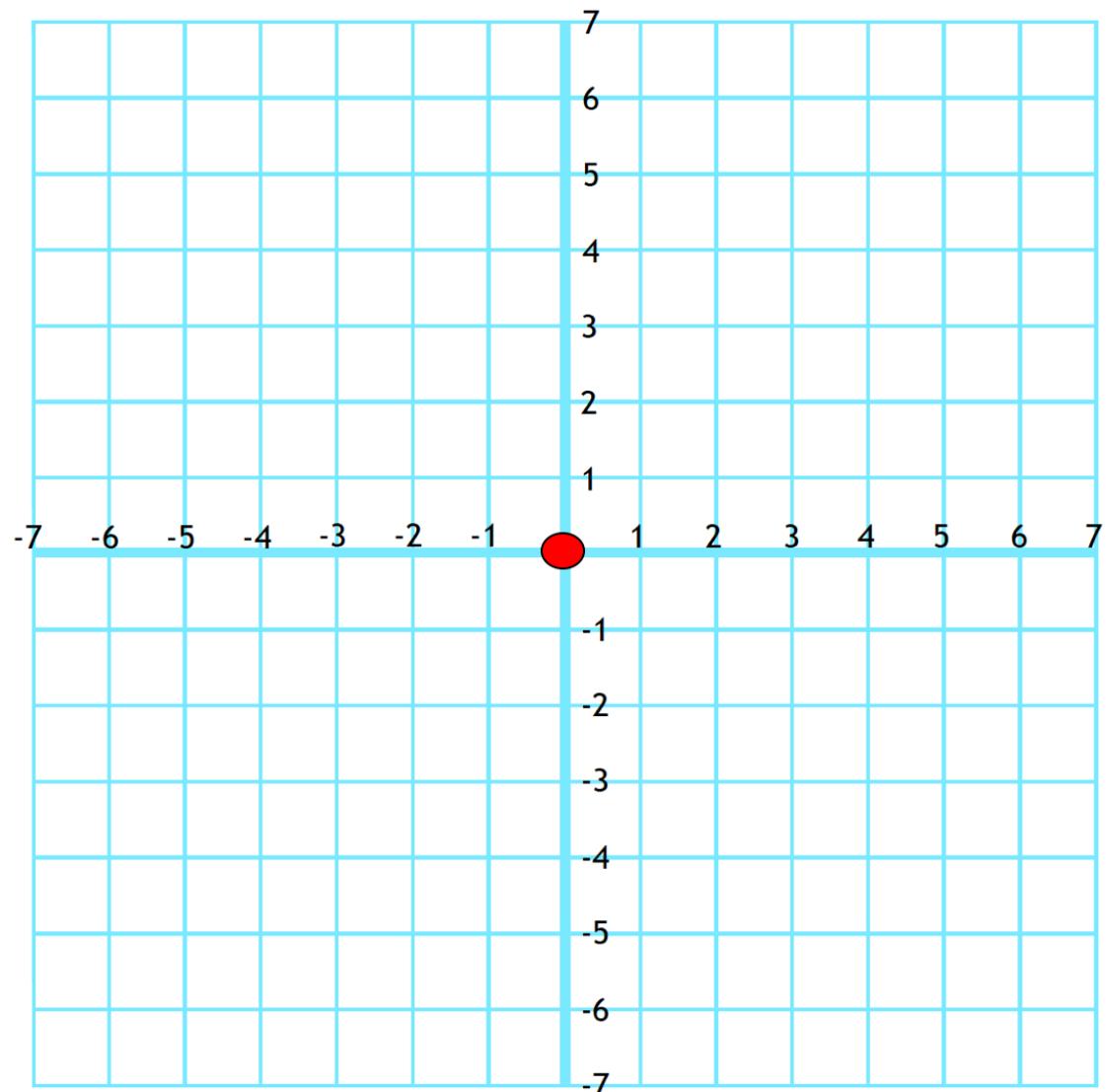
- A. $(-5, 7)$
- B. $(-1, 5)$
- C. $(0, -3)$
- D. $(1, 2)$
- E. $(2, 1)$
- F. $(4, -3)$



Suppose a quadrilateral with the vertices $P(1, 1)$, $R(0, -1)$, $F(-1, -1)$, and $H(0, -1)$ were dilated, with the center of dilation at the origin and with a **scale factor of 3**. Which of these would be a vertex of the dilated figure? Select three that apply. Circle the letter of each answer.

- A. $(0, -3)$
- B. $(-3, 0)$
- C. $(-1, -4)$
- D. $(-1, 4)$
- E. $(3, 3)$
- F. $(4, 4)$





The vertices of a trapezoid ABCD are $(3, 1)$, $(7, 1)$, $(6, 4)$, and $(3, 4)$ and the vertices of trapezoid EFGH are $(-3, -1)$, $(-7, -1)$, and $(-6, -4)$, and $(-3, -4)$. Which of these sequences of transformations of trapezoid ABCD exhibit the congruence between the two trapezoids? Select two that apply. Circle the letter of the answers below:

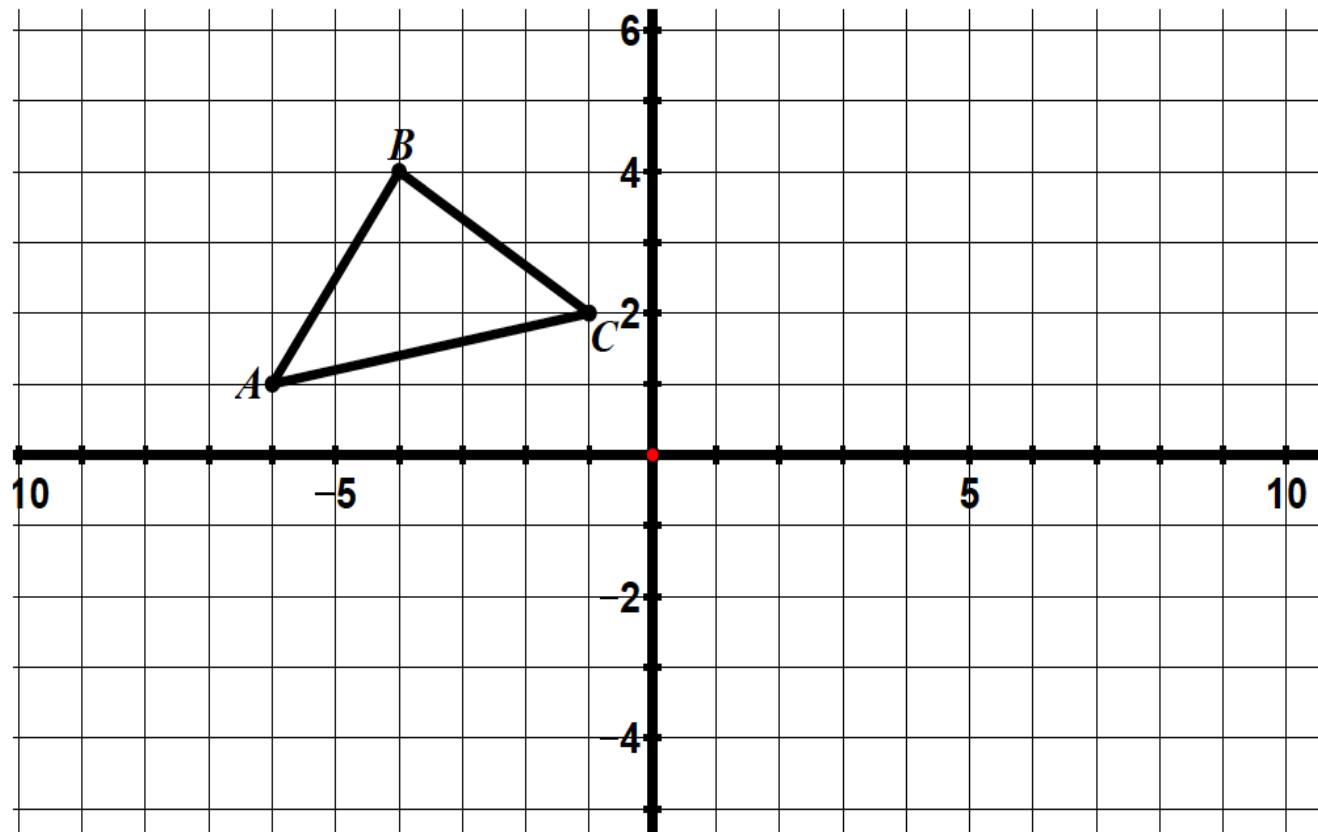
- A. a reflection across the x-axis and a translation 6 units left
- B. a reflection across the y-axis and a translation 2 units down
- C. a reflection across the x-axis and a reflection across the y-axis
- D. a reflection across the x-axis, a reflection across the y-axis, and a translation 1 unit left
- E. a rotation of 180 degrees about the origin
- F. a rotation of 90 degrees clockwise and then a reflection across the y-axis

Use $\triangle ABC$ (given) to perform each of the transformations given below:

STEP 1: Reflect $\triangle ABC$ across the x-axis. Label as $\triangle A'B'C'$.

STEP 2: Translate $\triangle ABC$ using $(x, y) \rightarrow (x + 9, y + 3)$. Label as $\triangle A''B''C''$.

STEP 3: Rotate $\triangle ABC$ 180 degrees. Label as $\triangle A'''B'''C'''$.

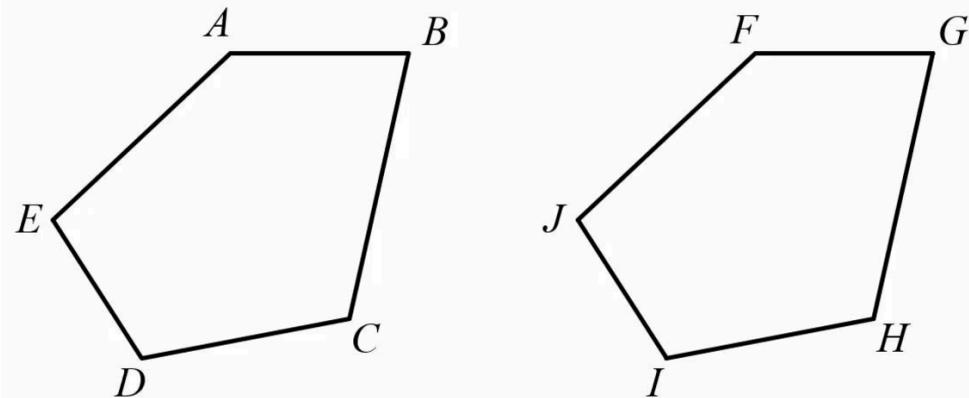


The vertices of $\triangle ABC$ are $(-6, 1)$, $(-4, 4)$, and $(-1, 2)$. Which vertices listed below are used for $\triangle A'B'C'$, $\triangle A''B''C''$, or $\triangle A'''B'''C'''$? Choose three that apply. Circle the letter of the answer.

- A. $(-5, 7)$
- B. $(-1, -2)$
- C. $(6, -1)$
- D. $(1, 3)$
- E. $(3, 4)$
- F. $(4, 3)$

When you name congruent shapes, you **must** name them in the correct order so that the corresponding parts line up.

$$\text{Pentagon } ABCDE \cong \text{Pentagon } FGHIJ$$



Angle B is congruent to _____.

Angle E is congruent to _____.

Angle F is congruent to _____.

Angle H is congruent to _____.

Name any angles that are acute: _____.

Name any angles that are obtuse: _____.

Draw two parallel lines passing through the vertices (4, 1) and (6, 3). Label these lines P and Q. Then perform a 90 degree clockwise rotation. Label your new lines P' and Q'.

Which lines are parallel to the x-axis? _____
Which lines are parallel to the y-axis. _____

