Geometry **Independent Practice**

Name _____

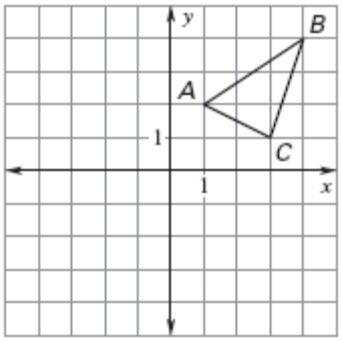
Period _____

Date _____

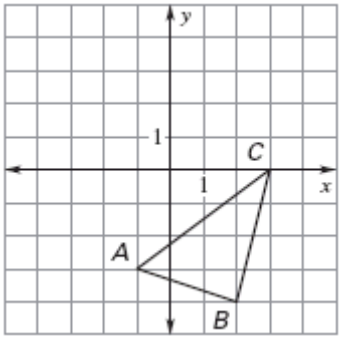
9A Transformations (Reflections and Symmetry)

Graph the reflection of the polygon in the given line.

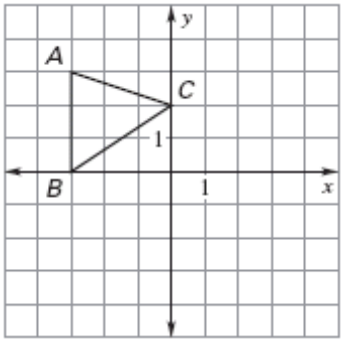
1. *x*-axis



2. $x = -1$

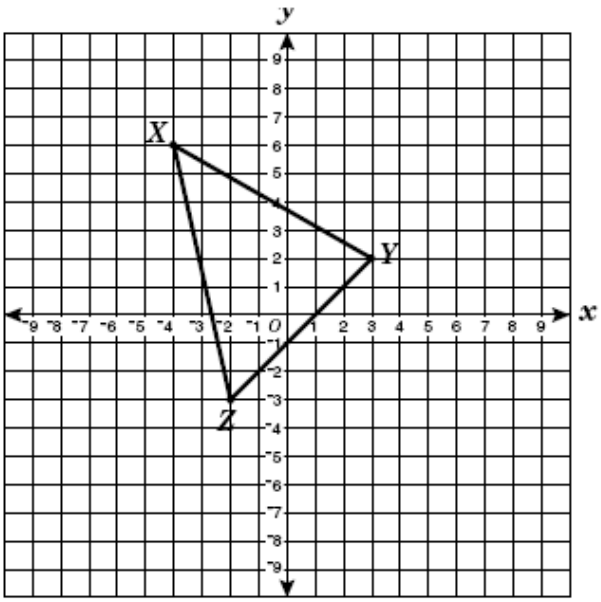


3. $y = 1$



Choose the correct answer for each problem. Show all work.

4



If triangle *XYZ* is reflected across the *y*-axis to form triangle *X′Y′Z′*, what is the coordinate of *Y′*?

F $(-3, 2)$

G $(4, 6)$

H $(2, -3)$

J $(3, -2)$

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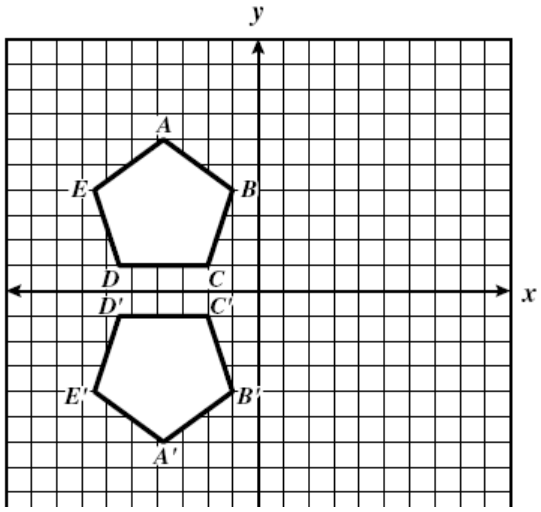

The polygon *A′B′C′D′E′* is —

A a translation of *ABCDE* across the *x*-axis

B a 180° clockwise rotation of *ABCDE* about the origin

C a reflection of *ABCDE* across the *y*-axis

D a reflection of *ABCDE* across the *x*-axis

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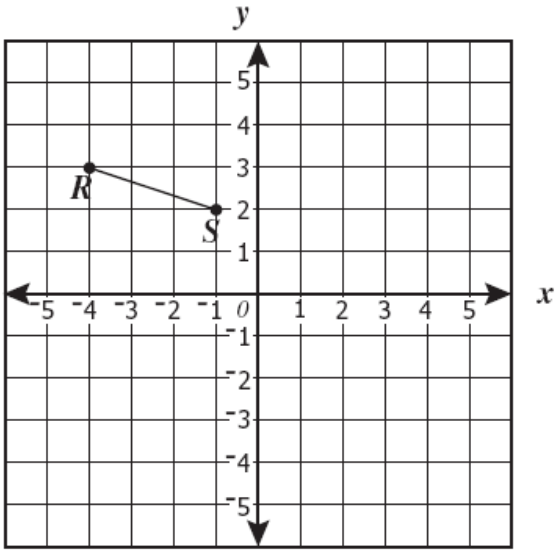

What are the *most* likely coordinates of R' if $\overline{R'S'}$ is a reflection of $\overline{RS}$ across the y-axis?

A (4, 3)
B $(^{-}4, ^{-}3)$
C $(4, ^{-}3)$
D (3, 4)

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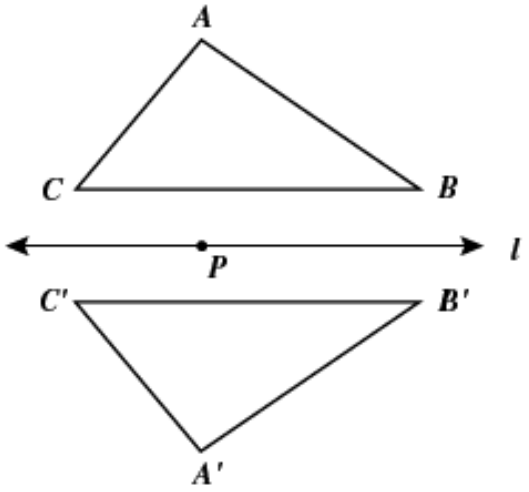
Triangle $A'B'C'$ is a transformation of triangle ABC.



If $A \rightarrow A'$, $B \rightarrow B'$, and $C \rightarrow C'$, $A'B'C'$ is a —

A reflection of triangle ABC across line l
B 180° rotation of triangle ABC about Point P
C translation of triangle ABC across the line l
D 90° rotation of triangle ABC across the line l

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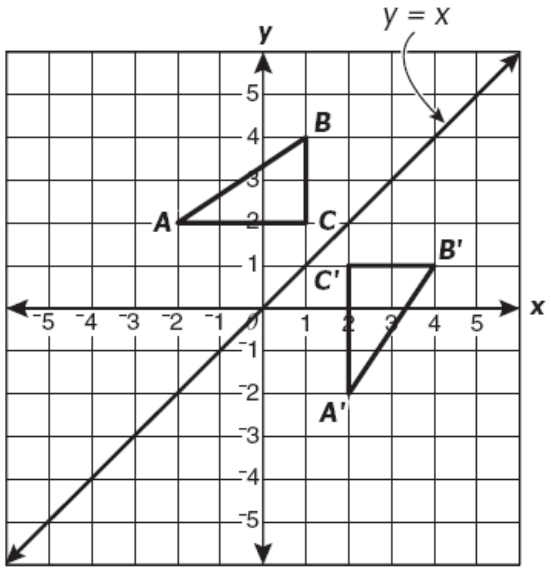

$\triangle A'B'C'$ is apparently the result of —

A reflecting $\triangle ABC$ across the y-axis
B reflecting $\triangle ABC$ across the x-axis
C rotating $\triangle ABC$ about the point (1, 2)
D reflecting $\triangle ABC$ across the line $y = x$

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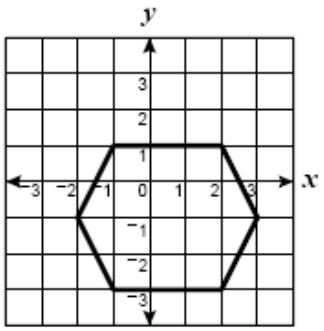

The hexagon in the drawing has a line of symmetry through —

A (−1, −3) and (2, 1)
B (1, 1) and (1, −3)
C (2, 3) and (2, −3)
D (−2, −1) and (3, −1)

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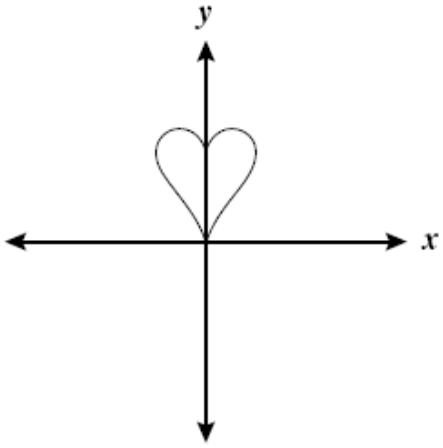

This figure is apparently symmetric with respect to —

A the x-axis only
B the y-axis only
C both the x-axis and the y-axis
D neither the x-axis nor the y-axis

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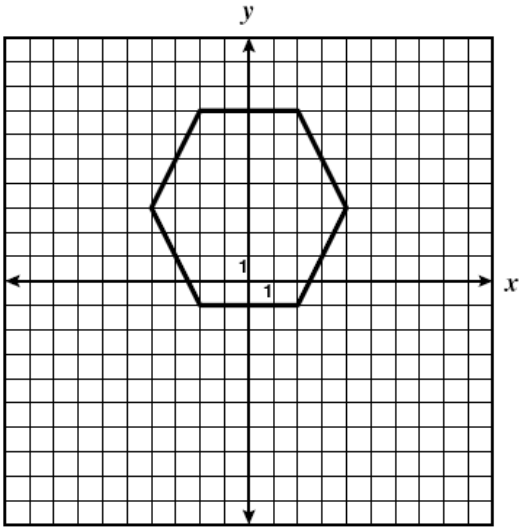
All the vertices of the hexagon have integral coordinates.



One of the lines of symmetry for the hexagon goes through —

F (−4, 3) and (4, 3)
G (−2, −2) and (2, 7)
H (−2, 7) and (2, −2)
J (2, −2) and (−2, −7)

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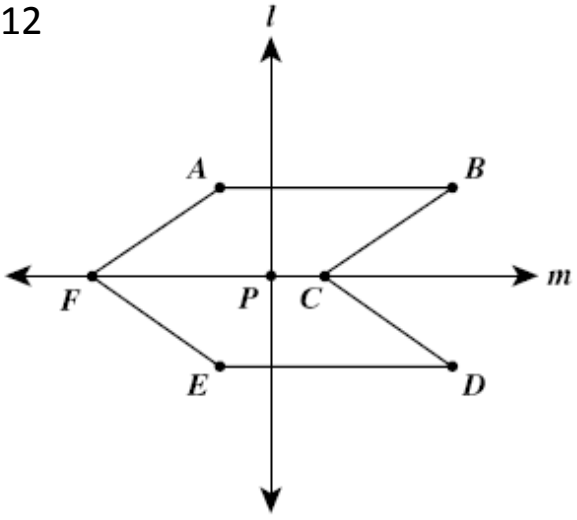

Hexagon *ABCDEF* is apparently symmetric with respect to —

A point P only
B line m only
C line l only
D both lines l and m only

13. On the coordinate plane below, draw a preimage in red and an image in blue using the line y = -x as the line of reflection.