

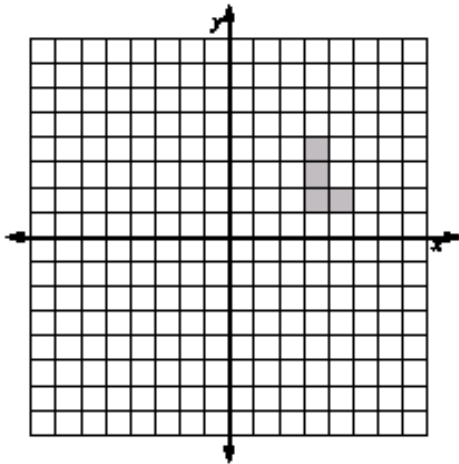
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**1999, Mathematics - Grade 10**  
**Question 16: Open Response**

Geometry

Use the diagram below to answer question 16.



a. Transform the shaded "L" in the first quadrant by using the following sequence of steps:

Step I. Reflect the "L" over the  $x$ -axis.

Step II. Rotate the result of Step I clockwise  $180^\circ$  about the origin.

Step III. Translate the result of Step II three units up to its final position.

As you transform the shaded "L," draw and label the image for each of the three steps.

b. Describe a transformation with fewer than three steps that would achieve the same result as the three steps in part a.

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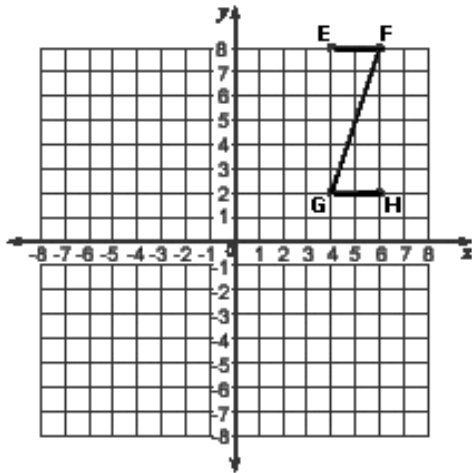
**1999, Mathematics - Grade 10**  
**Question 23: Multiple Choice**

*Geometry*

*Use the diagram to answer question 23.*



If the figure EFGH is translated 10 units down, what are the new coordinates of the image of point F?



- A. (6, -2)
- B. (-4, 8)
- C. (8, 6)
- D. (-4, -2)

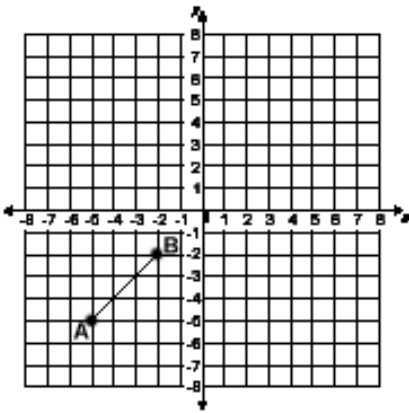
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**2000, Mathematics - Grade 10**

**Question 1: Multiple Choice**

Geometry

Use the graph to answer question 1.



Suppose that  $\overline{AB}$  is translated 6 units to the right.  
What are the coordinates of the image of point  $B$ ?

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

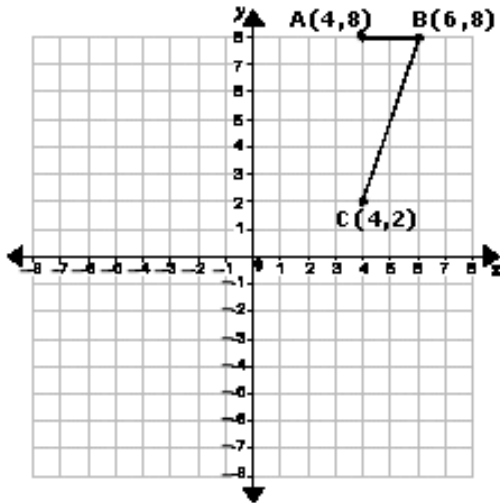
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**2000, Mathematics - Grade 10**  
**Question 39: Multiple Choice**

Geometry

Use the diagram to answer question 39.

Suppose that the figure  $ABC$  is reflected over the  $y$ -axis.  
What are the coordinates of the image of point  $A$ ?



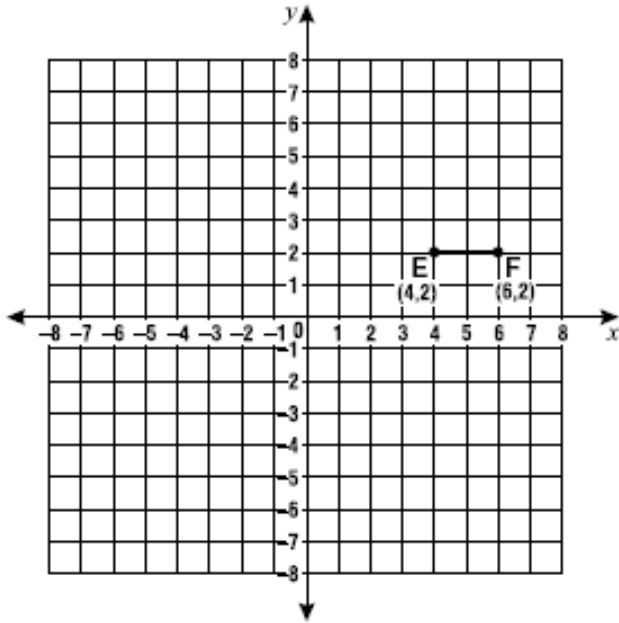
- A.  $(4, -8)$
- B.  $(-4, 8)$
- C.  $(-8, 4)$
- D.  $(8, -4)$

Name: \_\_\_\_\_

**2003, Mathematics - Grade 10**  
**Question 33: Multiple Choice**  
*Geometry*



The diagram below shows the location of  $\overline{EF}$  on a coordinate plane.



Suppose that  $\overline{EF}$  is rotated  $180^\circ$  clockwise about the origin. What are the coordinates of the image of point  $E$ ?

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

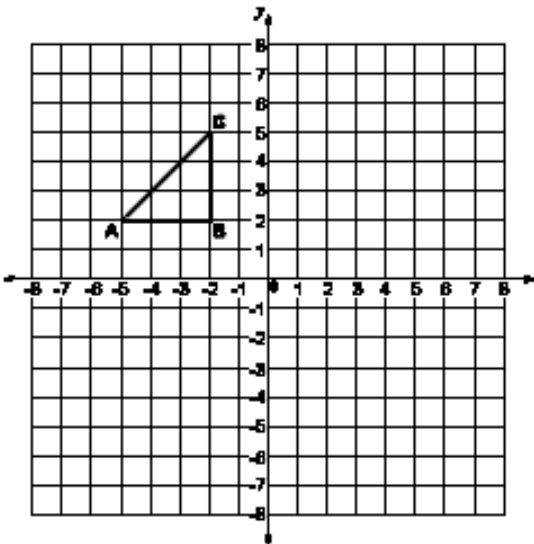
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**2001, Mathematics - Grade 10**

**Question 25: Multiple Choice**

Geometry

Use the graph below to answer question 25.



Suppose that  $\triangle ABC$  is reflected over the  $x$ -axis. What are the coordinates of the image of point  $C$ ?

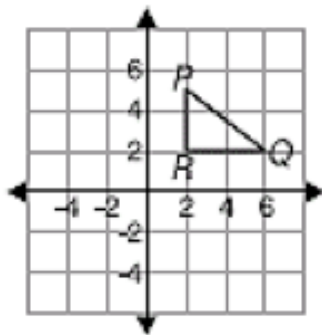
- A. (2,5)
- B. (2,-5)
- C. (-2,5)
- D. (-2,-5)

**2003, Mathematics - Grade 10**

**Question 25: Multiple Choice**

Geometry

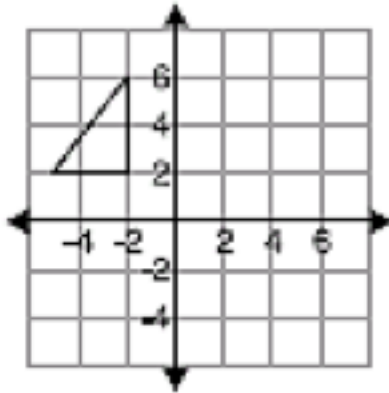
The diagram below shows  $\triangle PQR$  on a coordinate plane.



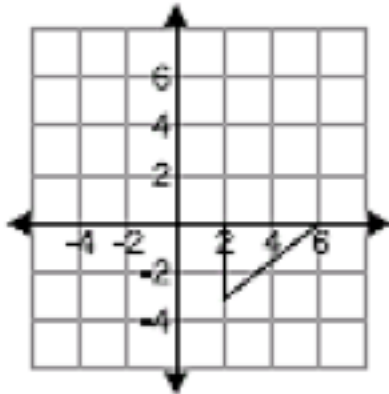
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Which of the following is the result of a reflection of  $\triangle PQR$ ?

A.

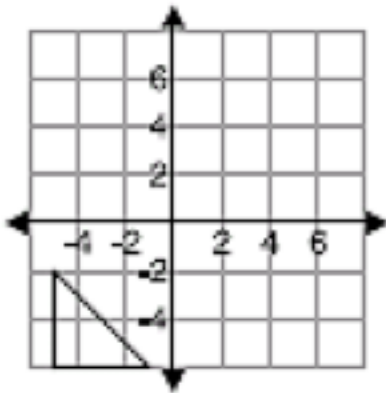


B.



Name: \_\_\_\_\_

C.



D.

