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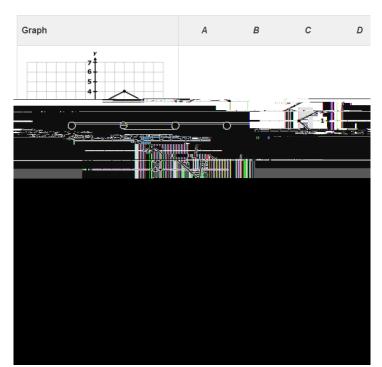
1. A figure is shown on the coordinate plane below.

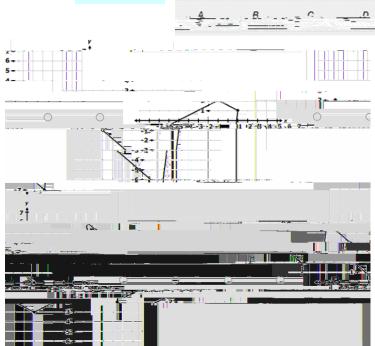
Four students each apply the following transformations to the figure but in different orders. The order that each student takes is shown.

Student $\Delta: I \rightarrow III \rightarrow II \rightarrow IV$

- I. Reflection over x-axis
- II. Translation of 1 unit left
- III. Translation of 2 units up
- IV. Rotation of 90° clockwise about the origin

Match each resulting graph with the correct student.





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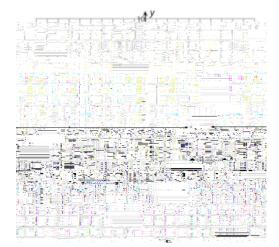
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DIT!

2. The figure below will be rotated 90° counter-clockwise about the origin and then reflected about the

What are the new coordinates of vertex L?

- A. (-3, 6)
- B. (-5, 7)
- C. (7, -5)
- D. (5, 7)



In the figure, angles 1,2,3, and 4 are created by the intersection of line with parallel lines and m.
 Complete the table using and choices in the box.

Statements	Reasons
1.	1. Given
2.	 Vertical angles postulate
3.	 Alternate interior angles postulate
4.	4. Transitive property
5.	 Def. supplementary angles
6.	6. Substitution Property

- 4. What steps need to be taken so that quadrilateral can be transformed to overlap quadrilateral so that their vertices match?
 - A. Rotate 90° clockwise about the origin,

6. What is the contrapositive of the statement below?

- A. If a polygon is regular, then the lengths of all sides are equal
- B. If a polygon is not regular, then not all of the sides have equal lengths
- C. If the lengths of all sides of a polygon are equal then it is not a regular polygon
- D. If the lengths of all sides of a polygon are not equal, then it is not a regular polygon
- 7. Which transformation represents a rigid motion of a line segment on the coordinate plane?

- -

8. A construction company is building the foundation for a new office building. The diagram below shows the lengths of some sides of the foundation. SHOW YOUR WORK

What is the length of the side between point and point ?

- A. 40 ft
- B. 30 ft
- C. 70 ft
- D. 50 ft
- 9. In the figure below, and Which statement BEST explains why is congruent to ?

by the AA criterion because the alternate interior angles are congruent by the AAS postulate because corresponding angles are congruent and by the ASA postulate because alternate interior angles are congruent and by the SAS postulate because , and corresponding angles are congruent

10. A lamppost is 6 feet high and casts an 8-foot shadow. At the same time of day, a flagpole near the lamppost casts a 20-foot shadow. Find the height in feet, -, of the flagpole. SHOW YOUR WORK

11. A 120

12. A triangle is shown on the graph. Perform the following transformations on the triangle below to create another triangle on the same coordinate grid.

Reflect about the Translate 2 units in a positive -direction Translate 4 units in a negative -direction

Graph the final image of the triangle after ALL transformations.

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