

Enrichment 3-7

Reflections and Symmetry

Visual Thinking

Reflect the figure across the y -axis and give the new coordinates.

1. What shape is the figure?

2. Across which axis will you reflect the figure?

3. What else are you asked for?

4. Name the coordinates of the figure to the right.

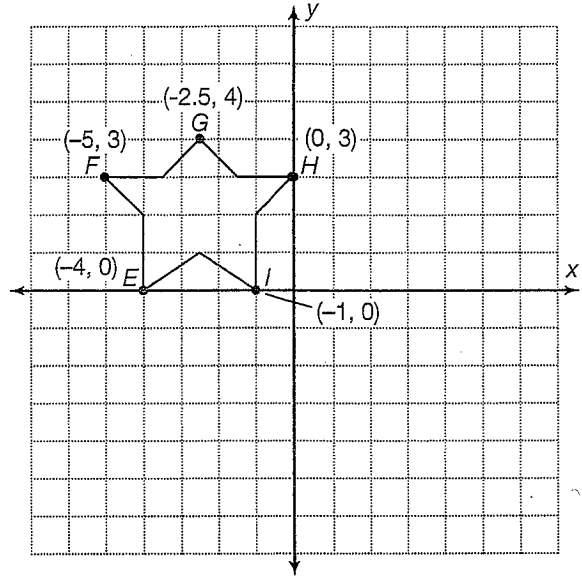
E _____

F _____

G _____

H _____

I _____



5. Will the distance from the y -axis change or stay the same?

6. How will the coordinates change when reflected across the y -axis?

7. Graph the reflection. What are the new coordinates?

E' _____ F' _____ G' _____ H' _____ I' _____

8. Why does one point not change when the figure is reflected?

9. Reflect the original figure across the x -axis and give the new coordinates.

E'' _____ F'' _____ G'' _____ H'' _____ I'' _____

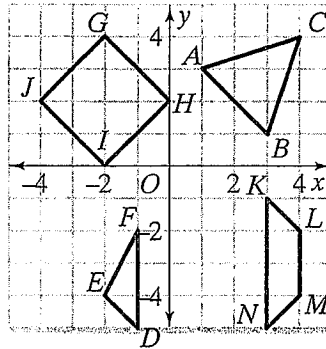
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Puzzle 3-7

Reflections and Symmetry

Study the figures in the coordinate plane. Find the points of each figure if it is reflected as described below.



- | | |
|--|--|
| 1. triangle ABC reflected across the y -axis | O. $(1, -5) (2, -4) (1, -2)$ |
| 2. triangle ABC reflected across the x -axis | T. $(2, 4) (0, 2) (2, 0) (4, 2)$ |
| 3. triangle DEF reflected across the y -axis | G. $(-3, -1) (-4, -2) (-4, -4) (-3, -5)$ |
| 4. triangle DEF reflected across the x -axis | M. $(3, 5) (4, 4) (4, 2) (3, 1)$ |
| 5. rhombus $GHIJ$ reflected across the x -axis | F. $(-1, 3) (-4, 4) (-3, 1)$ |
| 6. rhombus $GHIJ$ reflected across the y -axis | N. $(3, -1) (4, -4) (1, -3)$ |
| 7. trapezoid $KLMN$ reflected across the y -axis | E. $(-1, 5) (-1, 2) (-2, 4)$ |
| 8. trapezoid $KLMN$ reflected across the x -axis | R. $(-2, 0) (0, -2) (-2, -4) (-4, -2)$ |

Check your answers.

The state flower of Alaska is the _____
 1 3 5 7 4 6 8 4 2 3 6