

Grade 8 - Translations, Reflections and Rotations

- Test Answer Key

Common Core 8.G.A.1, 8.G.A.2, 8.G.A.3 · maths-pdf.fr/en/

Use this answer key to score the translations, reflections and rotations test out of 20 points. Each solution shows the full work and a scoring guide, so partial credit can be given fairly when a student shows correct steps but makes an arithmetic slip.

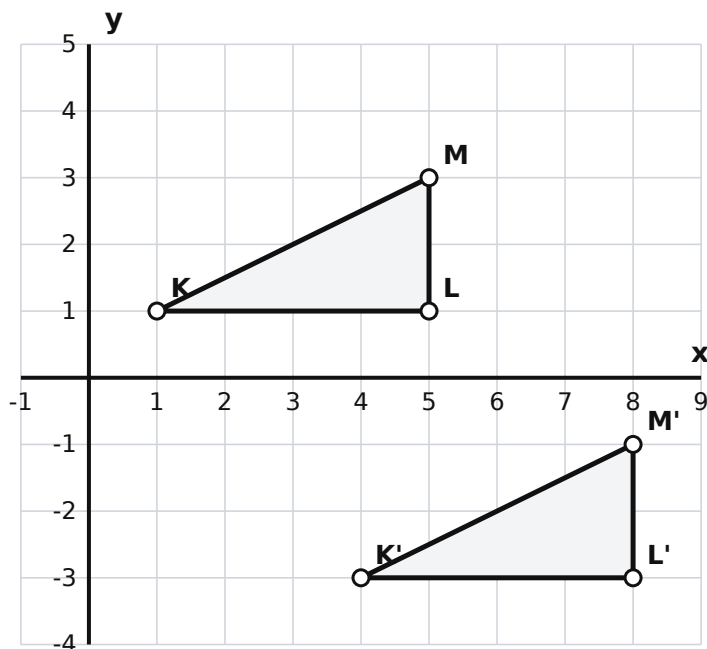
Grade 8 · Common Core State Standards: **8.G.A.1, 8.G.A.2, 8.G.A.3**

Question 1 - Points [3 pts]

- a. $(-2, 2)$
- b. $(-3, -6)$
- c. $(-1, 4)$

Scoring: 1 point each.

Question 2 - Translate a figure [3 pts]



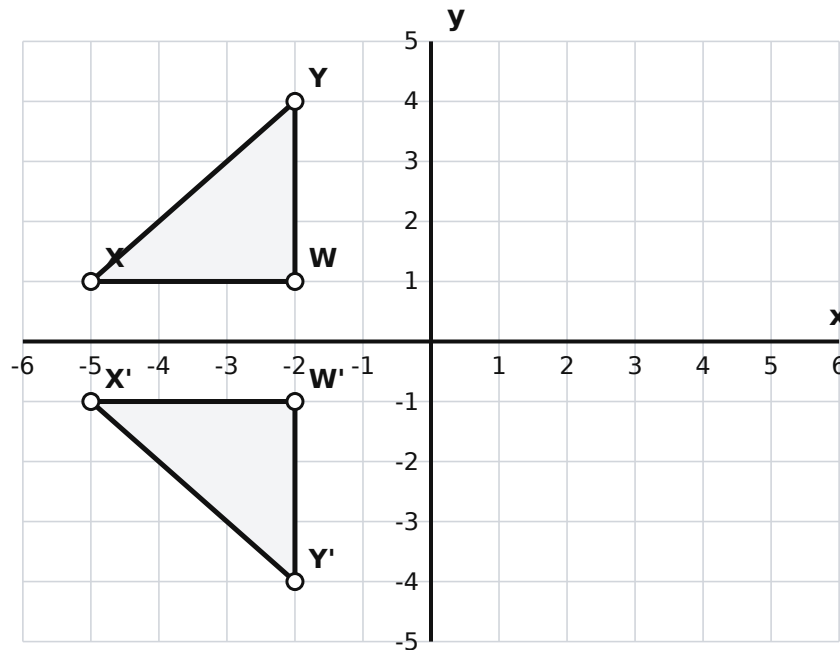
The image is below and to the right.

$$(x,y) \rightarrow (x+3,y-4).$$

$$K'(4,-3), L'(8,-3), M'(8,-1)$$

Scoring: 1 point for the rule, 2 points for three correct vertices (1 point if one is wrong).

Question 3 - Reflect a figure [3 pts]



Mirror image across the x-axis.

$$(x,y) \rightarrow (x,-y).$$

$$W'(-2,-1), X'(-5,-1), Y'(-2,-4)$$

Scoring: 1 point for the rule, 2 points for the vertices.

Question 4 - Sequence [3 pts]

Reflect: $(-2,5)$. Translate: $(-2,2)$.

Rotate 180° : $(-2,-5)$.

Scoring: 1 point for the reflection, 1 point for the translation, 1 point for the rotation.

Question 5 - Properties [2 pts]

The image is still 6 cm by 4 cm. Side lengths and angle measures (also parallelism) stay the same.

Scoring: 1 point for the dimensions. 1 point for two properties.

Question 6 - Congruent figures [3 pts]

Yes. A translation 4 right and 2 up maps A to D , B to E and C to F .

Scoring: 1 point for yes, 2 points for the transformation.

Question 7 - Mirror [2 pts]

The y-coordinate is unchanged and the x-coordinate changes sign.

The y-axis

Scoring: 1 point for the observation. 1 point for the y-axis.

Question 8 - Explain [1 pt]

A reflection preserves all side lengths and angle measures, so the image has exactly the same size and shape; flipping changes only the orientation.

Scoring: Award full credit for stating that lengths and angles are preserved.

Total
20 points