

Grade 8 - Translations, Reflections and Rotations - Test

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

Name: _____ Class: _____ Date: ____/____/____

This 20-point test checks translations, reflections, rotations and congruence on the coordinate plane (Common Core 8.G.A.1, 8.G.A.2 and 8.G.A.3). Work alone, show every step, and write each final answer clearly. You have 45 minutes. Calculators are not needed unless a question says so.

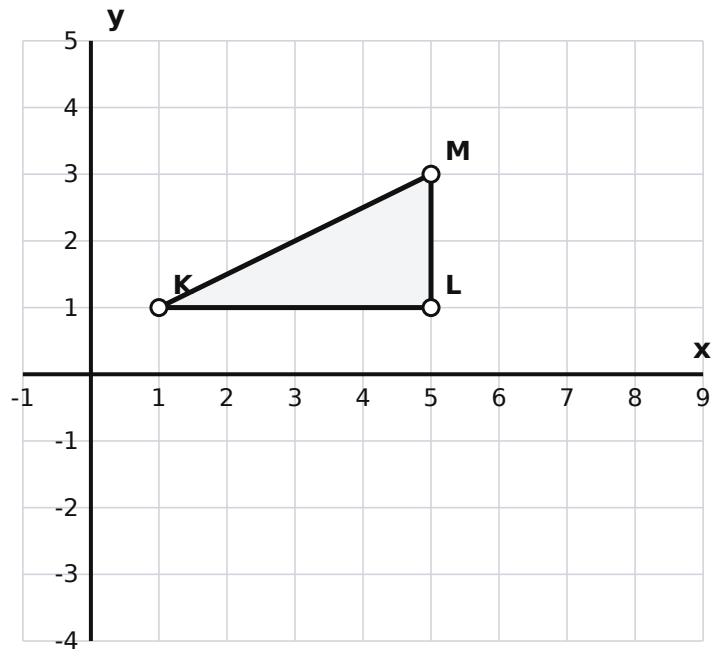
About this test

- Grade: Grade 8
- Chapter: Translations, Reflections and Rotations
- Standards: 8.G.A.1, 8.G.A.2, 8.G.A.3
- Time: 45 minutes
- Total: 20 points

Question 1 - Points [3 pts]

- Translate $(5, -1)$ left 7 and up 3. (1 point)
- Reflect $(-3, 6)$ across the x-axis. (1 point)
- Rotate $(4, 1)$ by 90° counterclockwise about the origin. (1 point)

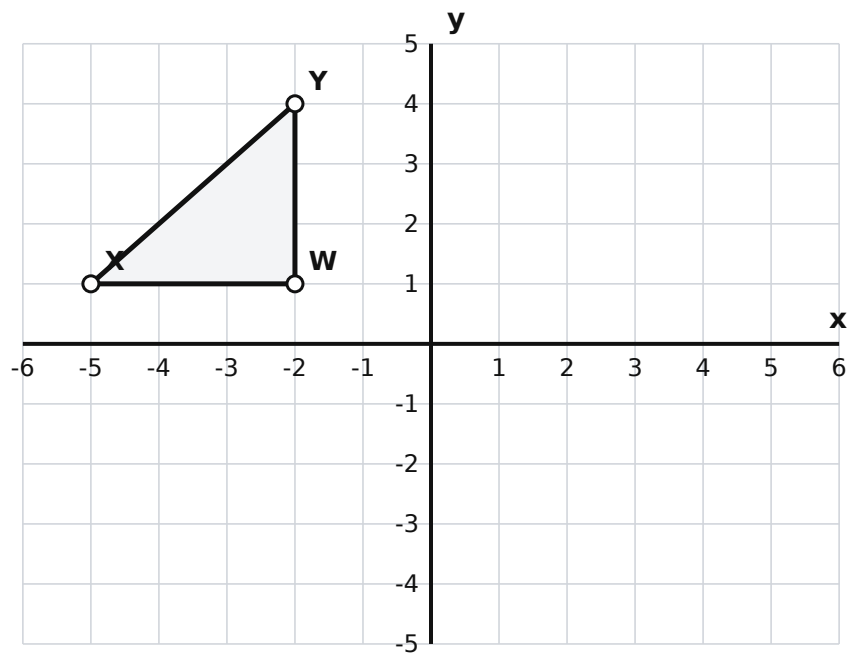
Question 2 - Translate a figure [3 pts]



Triangle KLM.

Translate triangle KLM 3 units right and 4 units down. List the image vertices.

Question 3 - Reflect a figure [3 pts]



Triangle WXY.

Reflect triangle WXY across the x-axis. List the image vertices.

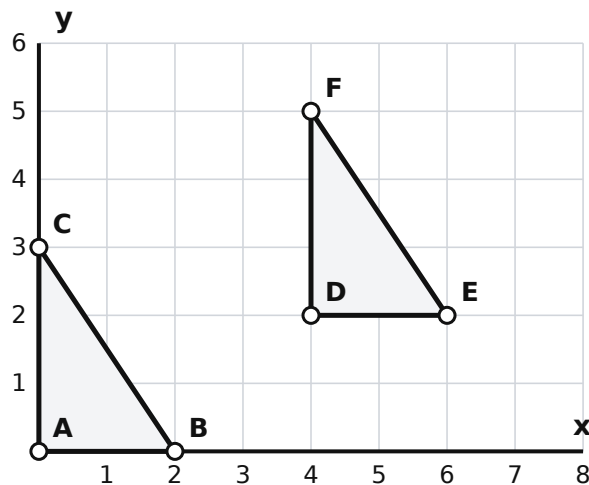
Question 4 - Sequence [3 pts]

Triangle ABC has vertex $A(2,5)$. Find the image of A after a reflection across the y -axis followed by a translation 3 units down. Then find the image after a 180° rotation about the origin of the original point A .

Question 5 - Properties [2 pts]

A rectangle is 6 cm by 4 cm. It is rotated 90° . What are the dimensions of the image? Name two properties that stay the same.

Question 6 - Congruent figures [3 pts]



Two triangles.

Are the two triangles congruent? Describe a transformation that proves your answer.

Question 7 - Mirror [2 pts]

A point $P(6,-2)$ is reflected across a line and its image is $P'(-6,-2)$. Name the line of reflection.

Question 8 - Explain [1 pt]

Explain in your own words why a reflection produces a figure congruent to the original even though the figure is flipped.