

Transformations and Congruence: math test, Grade 8 – download the PDF

Suggested time: 45 minutes. Out of 20 points. Calculator allowed only when the problem says so.

1 Translation

/ 4 pts

Triangle ABC has $A(-4, 1)$, $B(-1, 1)$, $C(-4, 5)$. Translate it by $\langle 7, -3 \rangle$.

- Give A' , B' , C' .
- Find AC and $A'C'$. What do you notice?

2 Reflections

/ 3 pts

Point M is $(-6, -2)$. Find its image (a) across the x-axis and (b) across the y-axis. (c) How far is M from the y-axis, and how far is the image in (b)?

3 Rotations

/ 4 pts

Point P is $(3, 4)$. Find its image under a rotation about the origin of (a) 90° counterclockwise, (b) 180° , (c) 90° clockwise. (d) Show that all three images are 5 units from the origin.

4 True or false?

/ 3 pts

Decide whether each statement is true or false, and justify in one sentence.

- a. A rotation changes the angle measures of a polygon.
- b. Two squares with side 4 cm are congruent.
- c. Two rectangles that each have a perimeter of 20 cm are congruent.

5 A sequence of transformations

/ 4 pts

Triangle DEF has $D(1, 2)$, $E(4, 2)$, $F(1, 6)$. Reflect it across the x-axis, then translate it by $\langle -2, 3 \rangle$.

- a. Give the final vertices D_2 , E_2 , F_2 .
- b. Find the perimeter of $\triangle D_2E_2F_2$. ($DE = 3$, $DF = 4$, $EF = 5$.)

6 Game sprite

/ 2 pts

A sprite is at $(2, 8)$. It is reflected across the y-axis, then moved 5 units down. Give its position after each step.



Test yourself: quick challenge for Grade 8

Change level

Level : Grade 8

6 random questions, instant feedback.



Start the challenge

 Keep exploring with Zyro

 Test solutions

Transformations and Congruence: math test solutions, Grade 8

 Math lessons

Transformations and Congruence: math lesson, Grade 8

 Math practice

Transformations and Congruence: math practice, Grade 8

 Test solutions

Dilations and Similarity: math test solutions, Grade 8

 Test solutions

 Math lessons

The Pythagorean Theorem: math test solutions, Grade 8

Dilations and Similarity: math lesson, Grade 8

Zyro vous emmène sur nos sites partenaires

Embarquez pour d'autres planètes du savoir et leurs applis.

Décollage