

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

Test solutions with the detailed point scale. Add up your points and spot what to review.

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

1 Translation

/ 4 pts

a. $A'(3, -2)$, $B'(6, -2)$, $C'(3, 2)$ (3 pts).

b. $AC = 5 - 1 = 4$ and $A'C' = 2 - (-2) = 4$. Translations preserve lengths (1 pt).

2 Reflections

/ 3 pts

(a) $(-6, 2)$ (1 pt). (b) $(6, -2)$ (1 pt).

(c) M is 6 units from the y-axis and so is its image $(6, -2)$ (1 pt).

3 Rotations

/ 4 pts

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

(d) $\sqrt{16 + 9} = 5$, $\sqrt{9 + 16} = 5$, $\sqrt{16 + 9} = 5$, and P itself: $\sqrt{9 + 16} = 5$ (1 pt).

4 True or false?

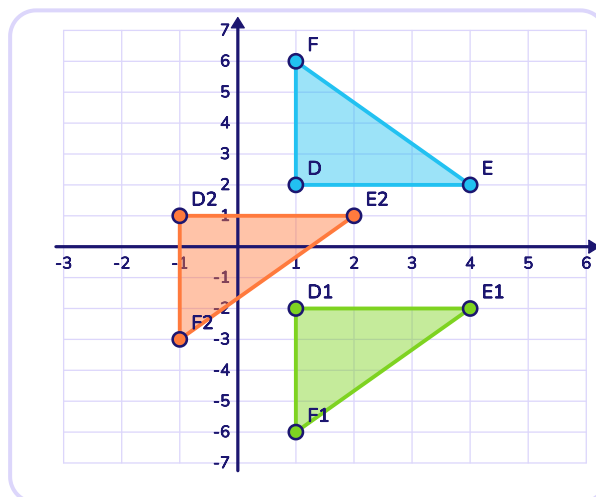
/ 3 pts

- a. False: rotations are rigid and preserve angles (1 pt).
- b. True: same size and same shape, so a rigid motion maps one onto the other (1 pt).
- c. False: a 6 cm by 4 cm rectangle and a 7 cm by 3 cm rectangle both have perimeter 20 cm but different side lengths (1 pt).

5 A sequence of transformations

/ 4 pts

- a. Reflection: $(1, -2)$, $(4, -2)$, $(1, -6)$. Translation: $D_2(-1, 1)$, $E_2(2, 1)$, $F_2(-1, -3)$ (3 pts).
- b. The final triangle is congruent to DEF , so its perimeter is $3 + 4 + 5 = 12$ units (1 pt).



6 Game sprite

/ 2 pts

After the reflection: $(-2, 8)$ (1 pt). After moving down: $(-2, 3)$ (1 pt).



Test yourself: quick challenge for Grade 8

[Change level](#)

Level : **Grade 8**

6 random questions, instant feedback.



Start the challenge



Keep exploring with Zyro



Math tests

Transformations and Congruence: math test, Grade 8



Math lessons

Transformations and Congruence: math lesson, Grade 8



Math quizzes



Math tests

Transformations and Congruence: math quiz, Grade 8

Dilations and Similarity: math test, Grade 8



Math tests

The Pythagorean Theorem: math test, Grade 8



Math lessons

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