



Rigid motions

GRADE 8 MATH

Name _____

Date _____

Use tracing paper if it helps. One skill: **rigid motions**.

WORKED EXAMPLE

Translations (slides), reflections (flips) and rotations (turns) change **position only**. Side lengths stay the same, angles stay the same, parallel lines stay parallel, straight lines stay straight — that is what **rigid** means. To tell a reflection from a rotation, label the corners and watch the **order**: a reflection **reverses** $A \rightarrow B \rightarrow C$, a rotation keeps it. On a symmetric shape the two can look identical, so test with a shape that has no symmetry.

1. A triangle is translated 5 right and 2 up. What happens to its side lengths and angles?

FLUENCY

Show your thinking

Answer

2. Triangle ABC is reflected in a mirror line. Its corners now read $A \rightarrow B \rightarrow C$ clockwise instead of anticlockwise. What does that tell you?

REASONING

Show your thinking

Answer

3. Jo says a rotation makes a shape's angles bigger because it looks tilted. Explain her error.

REASONING

Show your thinking

Answer

4. Two parallel lines are reflected. Are the images still parallel? How could you check?

REASONING

Show your thinking

Answer