

11-9 Transformations (Pages 595–599)

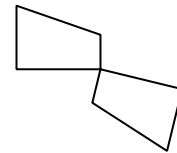
Transformations are movements of geometric figures, such as translations, rotations, and reflections.

Transformations	<ul style="list-style-type: none"> • A translation is a slide where the figure is moved horizontally or vertically or both. • A rotation is a turn around a point. • A reflection is a flip of the figure over a line. The transformed figure is the mirror image of the original. The original figure and its reflection form a symmetric figure. The line where you placed the mirror is called a line of symmetry. Each line of symmetry separates a figure into two congruent parts.
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EXAMPLE

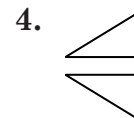
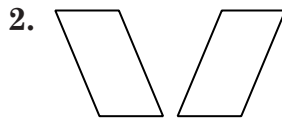
Which type of transformation does this picture show?

The figure has been rotated around the point that is the lower right corner of the original figure. This is a rotation.

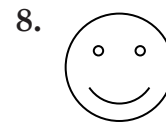
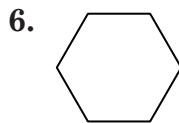
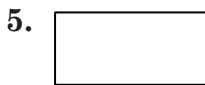


PRACTICE

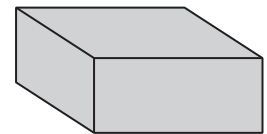
Tell whether each geometric transformation is a translation, a reflection, or a rotation.



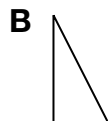
Trace each figure. Draw all lines of symmetry.



9. **Carpentry** How many ways can you slice a rectangular block of wood into two smaller congruent rectangular blocks? You may want to look at cereal box to help visualize the situation.



10. **Standardized Test Practice** Which of the following has exactly one line of symmetry?



Answers: 1. rotation 2. reflection 3. translation 4. reflection 5-8. See Answer Key. 9. 3 10. D