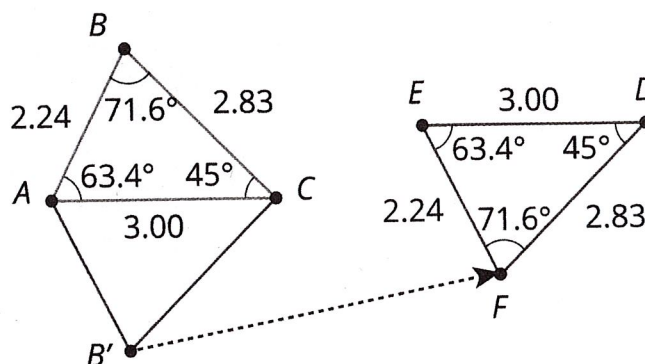


## Lesson 7 Summary

The transformations we've learned about so far, translations, rotations, reflections, and sequences of these motions, are all examples of **rigid transformations**. A rigid transformation is a move that doesn't change measurements on any figure.

Earlier, we learned that a figure and its image have corresponding points. With a rigid transformation, figures like polygons also have **corresponding sides** and **corresponding angles**. These corresponding parts have the same measurements.

For example, triangle  $EFD$  was made by reflecting triangle  $ABC$  across a horizontal line, then translating. Corresponding sides have the same lengths, and corresponding angles have the same measures.



| measurements in triangle $ABC$ | corresponding measurements in image $EFD$ |
|--------------------------------|---|
| $AB = 2.24$                    | $EF = 2.24$                               |
| $BC = 2.83$                    | $FD = 2.83$                               |
| $CA = 3.00$                    | $DE = 3.00$                               |
| $m\angle ABC = 71.6^\circ$     | $m\angle EFD = 71.6^\circ$                |
| $m\angle BCA = 45.0^\circ$     | $m\angle FDE = 45.0^\circ$                |
| $m\angle CAB = 63.4^\circ$     | $m\angle DEF = 63.4^\circ$                |

## Lesson 7 Glossary Terms

- rigid transformation
- corresponding (angles, distances, parts, points, sides)