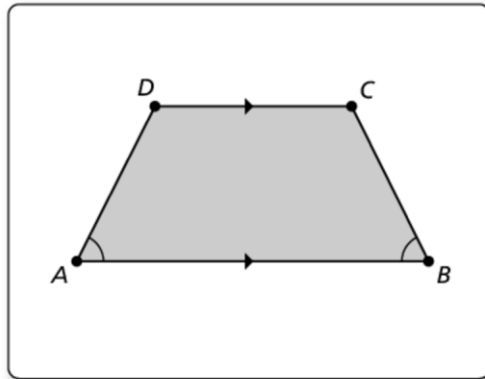


**7.5****Properties of Trapezoids and Kites**

For use with Exploration 7.5

**Essential Question** What are some properties of trapezoids and kites?**1 EXPLORATION:** Making a Conjecture about TrapezoidsGo to *BigIdeasMath.com* for an interactive tool to investigate this exploration.**Work with a partner.** Use dynamic geometry software.

- a. Construct a trapezoid whose base angles are congruent. Explain your process.

**Sample**

- b. Is the trapezoid isosceles? Justify your answer.
- c. Repeat parts (a) and (b) for several other trapezoids. Write a conjecture based on your results.

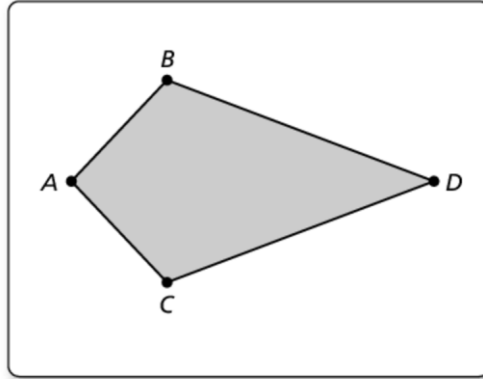
**7.5** Properties of Trapezoids and Kites (continued)**2 EXPLORATION:** Discovering a Property of Kites

Go to *BigIdeasMath.com* for an interactive tool to investigate this exploration.

Work with a partner. Use dynamic geometry software.

- Construct a kite. Explain your process.
- Measure the angles of the kite. What do you observe?

Sample

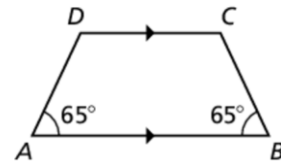


- Repeat parts (a) and (b) for several other kites. Write a conjecture based on your results.

**Communicate Your Answer**

- What are some properties of trapezoids and kites?

- Is the trapezoid at the right isosceles? Explain.



- A quadrilateral has angle measures of  $70^\circ$ ,  $70^\circ$ ,  $110^\circ$ , and  $110^\circ$ . Is the quadrilateral a kite? Explain.