

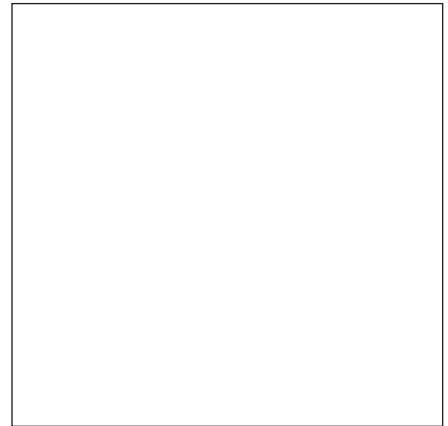
LESSON **Technology Lab Recording Sheet** pp. 416–417

6-5 Predict Conditions for Special Parallelograms

Try This

Activity 1

1. Construct \overline{AB} and \overline{AD} with a common endpoint A . Construct a line through D parallel to \overline{AB} . Construct a line through B parallel to \overline{AD} .
2. Construct point C at the intersection of the two lines. Hide the lines, and construct \overline{BC} and \overline{CD} to complete the parallelogram.
3. Measure the four sides and angles of the parallelogram.
4. Move A so that $m\angle ABC = 90^\circ$. What type of special parallelogram results?



- _____
5. Move A so that $m\angle ABC \neq 90^\circ$.
 6. Construct \overline{AC} and \overline{BD} , and measure their lengths. Now move A so that $AC = BD$. What type of special parallelogram results?
- _____

Try This

1. How does the method of constructing $ABCD$ in Steps 1 and 2 guarantee that the quadrilateral is a parallelogram?

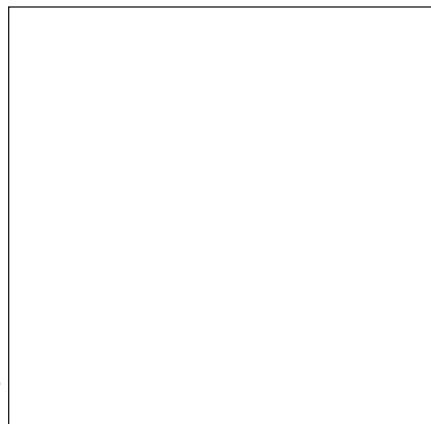
2. **Make a Conjecture.** What are two conditions for a rectangle? Write your conjectures as conditional statements.

LESSON **Technology Lab Recording Sheet**
6-5 **Predict Conditions for Special Parallelograms** continued

Activity 2

1. Use the parallelogram you constructed in Activity 1. Move A so that $AB = BC$. What type of special parallelogram results?

2. Move A so that $AB \neq BC$.
3. Label the point where the diagonals intersect as E . Measure $\angle AEB$.
4. Drag a vertex of the parallelogram so that $m\angle AEB = 90^\circ$. What type of special parallelogram results?



5. Move A so that $m\angle AEB \neq 90^\circ$.
6. Measure $\angle ABD$ and $\angle CBD$. Drag a vertex of the parallelogram so that $m\angle ABD = m\angle CBD$. What type of special parallelogram results?

Try This

3. **Make a Conjecture.** What are three conditions for a rhombus? Write your conjectures as conditional statements.

4. **Make a Conjecture.** A square is both a rectangle and rhombus. What conditions do you think must hold for a quadrilateral to be square?
