

ACTIVITY 3.3

Using Technology

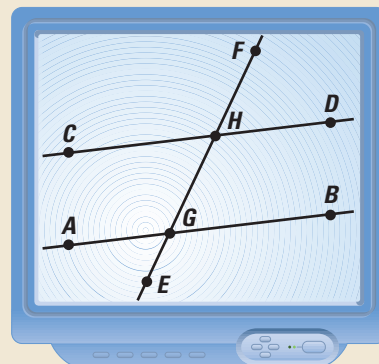
Geometry Software Activity for use with Lesson 3.3

Parallel Lines and Angles

You can use geometry software to explore the properties of parallel lines.

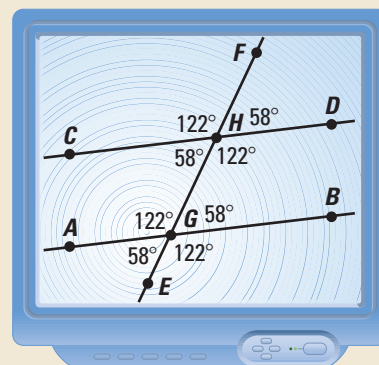
► CONSTRUCT

- 1 Draw two points. Label them A and B . Draw \overleftrightarrow{AB} .
- 2 Draw a point not on \overleftrightarrow{AB} . Label it C .
- 3 Use your software's *construct parallel line* feature to construct a line through C parallel to \overleftrightarrow{AB} .
- 4 Draw a point on the line you constructed. Label it D . Move A , B , C , and D to the edges of the screen, as shown.
- 5 Draw two points outside the parallel lines. Label them E and F . Draw transversal \overleftrightarrow{EF} .
- 6 Find the intersection of \overleftrightarrow{AB} and \overleftrightarrow{EF} . Label it G . Find the intersection of \overleftrightarrow{CD} and \overleftrightarrow{EF} . Label it H .



► INVESTIGATE

1. Measure all eight angles formed by the three lines. What do you notice?
2. Drag point E or F to change the angle the transversal makes with the parallel lines. Be sure E and F stay outside the parallel lines. What do you notice?



► MAKE A CONJECTURE

3. Make a conjecture about the measures of corresponding angles when two parallel lines are cut by a transversal.
4. Make a conjecture about the measures of alternate interior angles when two parallel lines are cut by a transversal.

EXTENSION

CRITICAL THINKING Calculate the sum of two consecutive interior angles. Make and test a conjecture about the sum.

STUDENT HELP

Visit our Web site
www.mcdougallittell.com
to see instructions for
several software
applications.