

**Technology Activity Keystrokes**

For use with page 329

**TI-92****Construct**

1. Draw
- $\overline{AB}$
- .

**F2** 5 (Move cursor to desired location for point A.) **ENTER** A (Move cursor to desired location for point B.) **ENTER** B

Use the same feature to draw  $\overline{AC}$ .

2. Construct a line through point B parallel to
- $\overline{AC}$
- .

**F4** 2 (Place the cursor on point B.) **ENTER** (Move the cursor to  $\overline{AC}$ .) **ENTER**

3. Construct a line through point C parallel to
- $\overline{AB}$
- .

**F4** 2 (Place the cursor on point C.) **ENTER** (Move the cursor to  $\overline{AB}$ .) **ENTER**

4. Label the intersection of the two lines as point F and then hide the lines.


**F2** 3 (Move the cursor to the intersection of the two lines.) **ENTER** F

**F7** 1 (Move the cursor to one of the parallel lines.) **ENTER** (Move the cursor to the second parallel line.) **ENTER** (The lines will be dashed and will disappear when the next command is given.)

5. Draw segments
- $\overline{BF}$
- and
- $\overline{CF}$
- .

**Investigate**

1. Drag point A.

**F1** 1 (Place cursor on point A.) **ENTER** (Use the drag key  and the cursor pad to drag the point.) Repeat for points B and C.

2. Measure
- $\overline{AB}$
- ,
- $\overline{BF}$
- ,
- $\overline{CF}$
- , and
- $\overline{AC}$
- .


**F6** 1 (Move cursor to  $\overline{AB}$ .) **ENTER** (Move cursor to  $\overline{BF}$ .) **ENTER**  
(Move cursor to  $\overline{CF}$ .) **ENTER** (Move cursor to  $\overline{AC}$ .) **ENTER**

3. See Investigate Step 1.

5. Measure
- $\angle A$
- ,
- $\angle B$
- ,
- $\angle C$
- , and
- $\angle F$
- .

**F6** 3 (Place cursor on point B.) **ENTER** (Place cursor on point A.) **ENTER**  
(Place cursor on point C.) **ENTER** Repeat for the other angles.

Drag point A.

**F1** 1 (Place cursor on point A.) (Use the drag key  and the cursor pad to drag the point.)

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### Extension

Draw diagonals  $\overline{AF}$  and  $\overline{BC}$  using the segment command. ( **F2** 5)

Label the intersection point of the two diagonals as point  $G$  using the intersection point command. ( **F2** 3)

Measure  $\overline{AB}$ ,  $\overline{BG}$ ,  $\overline{FG}$ , and  $\overline{CG}$ .

**F6** 1 (Place cursor on point  $A$ .) **ENTER** (Move cursor to point  $B$ .) **ENTER**

Repeat for the other segments.

## SKETCHPAD

### Construct

1. Draw  $\overline{AB}$  and  $\overline{AC}$ . Choose segment from the straightedge tools.
2. Construct a line through point  $B$  parallel to  $\overline{AC}$ . Use the selection arrow tool to select  $\overline{AC}$  and point  $B$ . Choose **Parallel Line** from the **Construct** menu.
3. Construct a line through point  $C$  parallel to  $\overline{AB}$ . See Step 2.
4. Label the intersection of the two lines as point  $F$  and then hide the lines. Select point from the toolbox and click on the intersection point. Relabel the point. Use the selection arrow tool to select the two lines. Select **Hide Lines** from the **Display** menu.
5. Draw  $\overline{BF}$  and  $\overline{CF}$ . Select segment from the straightedge tools.

### Investigate

1. Use the translate selection arrow tool to drag points  $A$ ,  $B$ , and  $C$ .
2. Measure  $\overline{AB}$ ,  $\overline{BF}$ ,  $\overline{CF}$ , and  $\overline{AC}$ . Use the selection arrow tool to select the four segments. Choose **Length** from the **Measure** menu.
3. Use the translate selection arrow tool to drag points  $A$ ,  $B$ , or  $C$ .
5. Measure  $\angle A$ ,  $\angle B$ ,  $\angle C$ , and  $\angle F$ . To measure  $\angle A$ , use the selection arrow tool to select points  $B$ ,  $A$ , and  $C$ . Then select **Angle** from the **Measure** menu. Repeat for the remaining angles. Before selecting the next angle, be sure to click anywhere in the work area to deselect the previous points. Use the translate selection arrow tool to drag points  $A$ ,  $B$ , and  $C$ .

### Extension

Draw diagonals  $\overline{AF}$  and  $\overline{BC}$ . Choose segment from the straightedge tools. Label the intersection point of the two diagonals as point  $G$ . Select point from the toolbox and click on the intersection point.

Measure  $\overline{AB}$ ,  $\overline{BG}$ ,  $\overline{FG}$ , and  $\overline{CG}$ . Use the selection arrow tool to select the four segments. Choose **Length** from the **Measure** menu.