

Technology Activity Keystrokes

For use with page 411

TI-92*Construct*

1. Draw scalene triangle
- ABC
- .

F3 3 (Locate desired position for A .) **ENTER** A (Move to location for B .) **ENTER** B (Move to location for C .) **ENTER** C

2. Draw intersecting lines
- k
- and
- m
- so the lines do not intersect the triangle.

F2 4 (Move cursor to desired location.) **ENTER** (Move cursor to draw line k .) **ENTER** k

F2 4 (Move cursor to desired location.) **ENTER** (Move cursor to draw line m .) **ENTER** m

3. Label the point of intersection of lines
- k
- and
- m
- as
- P
- .

F2 3 (Move cursor to the point of intersection of the two lines.)
ENTER P

Investigate

1. Reflect triangle
- ABC
- in line
- k
- .

F5 4 (Place cursor on triangle ABC .) **ENTER** (Move cursor to line k .) **ENTER**

Label the new points on the triangle A' , B' , and C' .

F7 4 (Set cursor on reflected point A .) **ENTER** A **2nd** [CHAR]

3 7 **ENTER** **F7** 4 (Set cursor on reflected point B .) **ENTER** B
2nd [CHAR]

3 7 **ENTER** **F7** 4 (Set cursor on reflected point C .) **ENTER** C
2nd [CHAR]

3 7 **ENTER**

Reflect triangle $A'B'C'$ in line m .

F5 4 (Place cursor on triangle $A'B'C'$.) **ENTER** (Move cursor to line m .) **ENTER**

Label the new points on the triangle A'' , B'' , and C'' .

F7 4 (Set cursor on reflected point A .) **ENTER** A **2nd** [11] **ENTER**

F7 4 (Set cursor on reflected point B .) **ENTER** B **2nd** [11] **ENTER**

F7 4 (Set cursor on reflected point C .) **ENTER** C **2nd** [11] **ENTER**

3. Draw segments
- AP
- and
- $A''P$
- .

F2 5 (Place cursor on point A .) **ENTER** (Move cursor to point P .)
ENTER

Technology Activity Keystrokes

For use with page 411

F2 5 (Place cursor on point A'' .) **ENTER** (Move cursor to point P .)

ENTER

4. Measure angle APA'' .

F6 3 (Place cursor on point A .) **ENTER** (Move cursor to point P .)

ENTER (Move cursor to point P'' .) **ENTER**

Measure the acute angle formed by lines k and m .

F6 3 (Place cursor on line k .) **ENTER** (Move cursor to point P .)

ENTER (Move cursor to line m .) **ENTER**

5. Find the measures of angles BPB'' and CPC'' (to keep the diagram simpler, it is not necessary to draw in the sides of these angles).

F6 3 (Place cursor on point B .) **ENTER** (Move cursor to point P .)

ENTER (Move cursor to point B'' .) **ENTER**

F6 3 (Place cursor on point C .) **ENTER** (Move cursor to point P .)

ENTER (Move cursor to point C'' .) **ENTER**

SKETCHPAD

Construct

1. Draw a scalene triangle ABC using the segment straightedge tool.
2. Draw intersecting lines k and m using the line straightedge tool.
3. Label the point of intersection of the two lines as P . Select point from the toolbox and click on the intersection point. Relabel the point.

Investigate

1. Reflect triangle ABC in line k . Select line k . Choose **Mark Mirror** from the **Transform** menu. Use the selection arrow tool to select the segments and points of triangle ABC . Choose **Reflect** from the **Transform** menu. Repeat these steps to reflect triangle $A'B'C'$ in line m .
3. Draw segments AP and $A''P$ using the segment straightedge tool. Measure angle APA'' . To measure angle APA'' , use the selection arrow tool to select points A , P , and A'' . Then select **Angle** from the **Measure** menu.
4. Measure the acute angle formed by lines k and m . See Step 4.
5. Find the measures of angles BPB'' and CPC'' (to keep the diagram simpler, it is not necessary to draw in the sides of these angles). See Step 5.