John Hanna

Teaneck High School

HANNA   DEG AUTO   SEQ

medians of a triangle

DEG AUTO   SEQ

angle bisectors
in a triangle

HANNA   DEG AUTO   SEQ

A   78.22°

Not collinear

HANNA   DEG AUTO   SEQ

jhanna@teaneckschools.org
www.johnhanna.us

```
              :Discovering geometry with Cabri Geometry
 :  using the TI-92 or Voyage 200
 :John Hanna, Teaneck High School
 :jhanna@teaneckschools.org
 :
 :for the T^3 Regional Conference
 :Middlesex County College
 :October 19, 2002
 :====================================
 :
 :
 :1. Sum of angles in a triangle.
 :
 :    Press APPS
 :    Select Cabri Geometry
 :    Select New
 :    Select a folder
 :    Enter a name
 :    Press ENTER
 :
 :    To construct a triangle
 :      Press F3, 3
 :      Place three points
 :      Press ESC to return to pointer
 :
 :    Somewhere else on the screen,
 :    place a point: Press F2, 1.
 :    Move cursor, press ENTER.
 :
 :    Now to construct 3 lines through the point that are parallel to
 the three sides of the triangle:
 :
 :      Press F4, 2
 :      Point to the point, press ENTER, then point to a side of the
 triangle and press ENTER again
 :      Repeat three times
 :
 :      Now, to lay four rays over the lines:
 :        Press F2, 6.
 :        Point to the intersection of the three lines. Press ENTER.
 :        Point to another point on a line, press ENTER.
 :        Repeat 4 times
 :
 :      To hide the lines (do not delete the lines!):
 :        Press F7, 1
 :        Point to and press ENTER on the three lines
 :        Press ESC to return to pointer
 :
 :    Finally, to move the vertices of the triangle around:
 :     point to a vertex
 :     Press and hold the HAND key.
 :     Move the point with the cursor keys.
 :     Watch the four rays.
 :
```
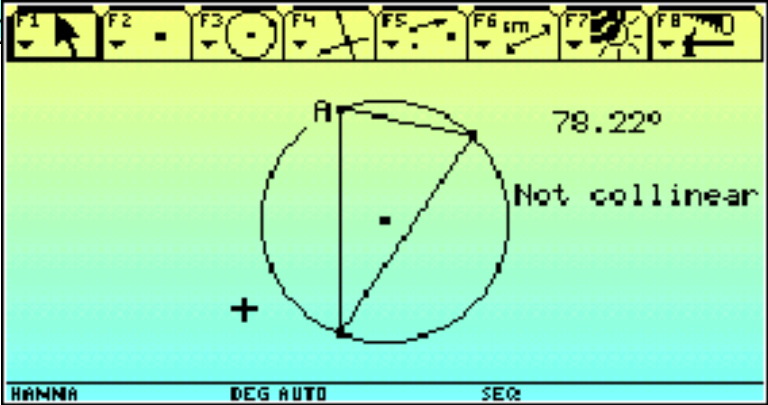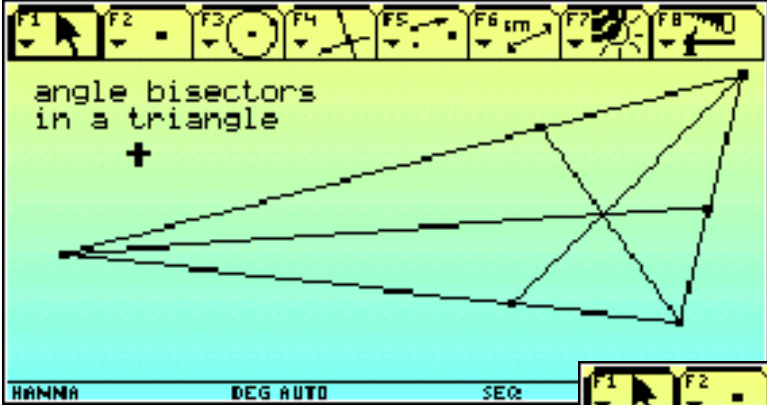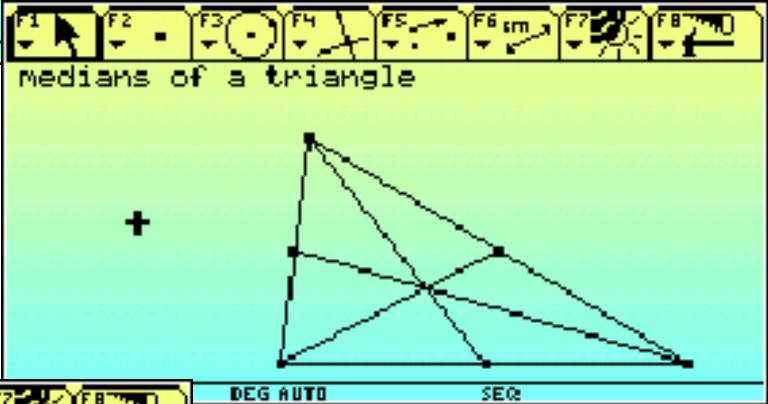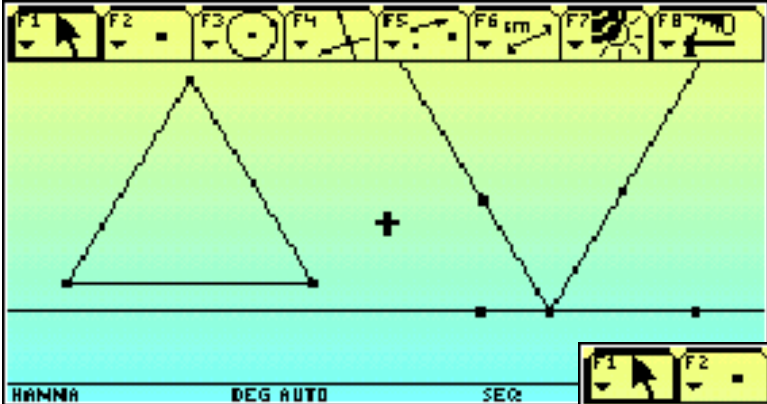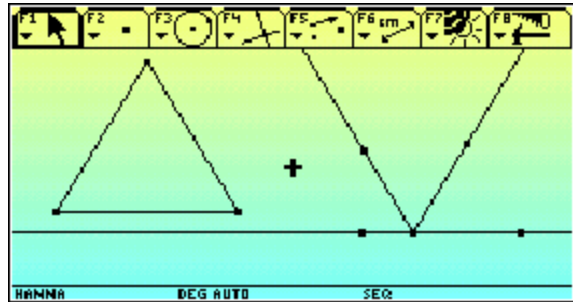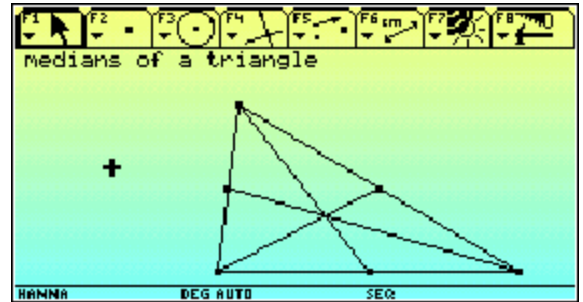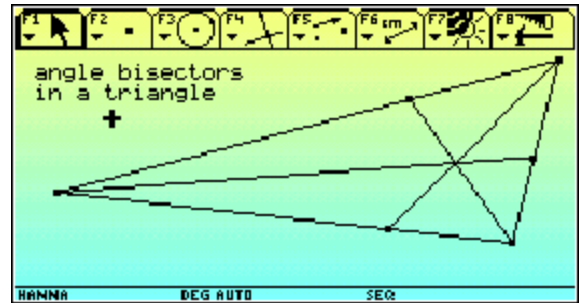
:2. Medians in a triangle.
:
:   New diagram (F8, 3).
:
:   Construct a triangle.
:   Construct the midpoints of the sides
(F4, 3). Point to each side and press
ENTER.
:   Construct the segments (F2, 5).
Point to a vertex, press ENTER, then point
to the midpoint of the opposite side and
press ENTER. Repeat three times.
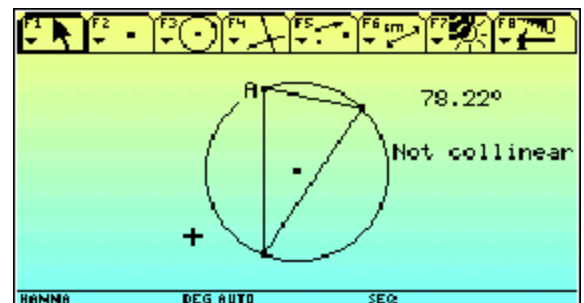:
:   Finally, to move the vertices of the triangle around:
:   point to a vertex
:   Press and hold the HAND key.
:   Move the point with the cursor keys.
:   Watch the medians.
:
:3. Angle bisectors in a triangle.
:
:   New diagram (F8, 3).
:
:   Construct a triangle.
:   Construct angle bisectors (F4, 5).
Point to a vertex of the triangle, press
ENTER, point to a second vertex (this is
the one that will be bisected), press
ENTER, then point to the third vertex,
press ENTER.
:   Repeat three times
:   Construct segments (F2, 5) from the vertex to the intersection of
the angle bisector with the side. Point to the vertex, press ENTER,
then point to the intersection, press ENTER.
:   Repeat three times.
:   Hide the angle bisector lines (*do not delete them!*)
:   Finally, to move the vertices of the triangle around:
:   point to a vertex
:   Press and hold the HAND key.
:   Move the point with the cursor keys.
:   Watch the angle bisectors.
:
:4. A triangle in a circle
:   New diagram (F8, 3)
:
:   Construct a circle (F3, 1)
:   Construct a triangle (F3, 3) with
vertices on the circle.
:
:   Measure an angle of the triangle.
:   Now move the vertices around the
circle and watch the size of the measured
angle.
: Add a test for "Collinearity" (F6, 8, 1) using the center and the
endpoints of the side opposite your measured angle.