Lesson 3

Information:

- ICTM Annual Conference: Friday, February 22; registration forms
- Project #1 revised due date: Feb. 6

Materials:

- TI-92 calculator
- TI-92 Handouts (pick up in class)

Follow-up:

- Share TI and NCTM web site ‘gem’

TI-92 Basics – follow handout instructions in class from

"The TI-92 Workshop, Part 3: Interactive Geometry" by B. Kutzler

"Visualizing Geometry with the TI-92" by Roberta Koss

Homework due Monday, 2/11:

Open a new folder and use a variable name of "[your initials]Practice"

a. Draw an acute triangle and label it ABC.
b. Measure the length of all sides of the triangle.
c. Measure all angles of the triangle.
d. Change the triangle into an obtuse triangle and observe what happens to the measures.
e. Clear all [F8, 8:Clear All]
f. Draw a line *l* and a point *P* not on *l*.
g. Draw a line *m* parallel through *P*.
h. Draw a line *n* perpendicular through *P*.
i. Move point *P* around and observe what happens.
h. Move line *l* around and observer what happens.

Homework due Monday, 2/11:

Open a new folder and use a variable name of "[your initials]Euler"

Draw any triangle ABC. Construct the following three points:

- G, the centroid (intersection of medians)
- H, the orthocenter (intersection of altitudes)
- P, the circumcenter (intersection of perpendiculars)

a. Euler discovered an interesting fact about G, H, and P. What do you suppose the "Euler line" might be?

b. Measure the distances PG and GH, and then make a conjecture concerning the ratio of these distances.

c. Find the midpoint N of the segment $\overline{PH}$, and draw the circle centered at N which passes through the midpoint of a side of your triangle. Where does it intersect the other sides of the triangle?

d. Describe how the circle at N intersects the segments $\overline{HA}$, $\overline{HB}$, and $\overline{HC}$.