Geometer's Sketchpad Investigation 3.6
Constructions with Geometer's Sketchpad

I. The RULES
  A. For the following activities, we will use the same rules that we have been using in class: only a compass and straightedge are allowed. This means you can only use the following tools:

    The Selection tool.

    The Point tool.
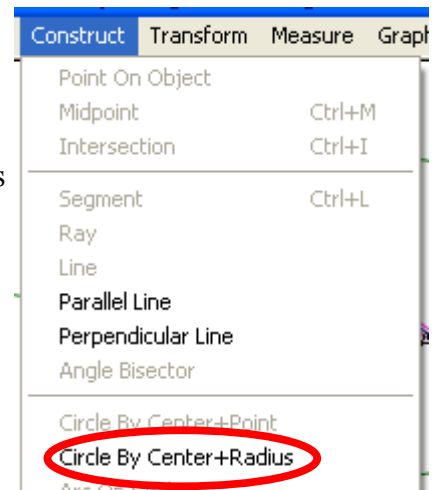
    The Compass tool.

    The Straightedge tool (click and hold to choose between segment, ray, and line).

    There is one more tool you can use: Since the Compass tool does not let you keep the radius setting, you can also measure the radius of a circle and then construct a circle with the same radius. Practice this by following these steps:
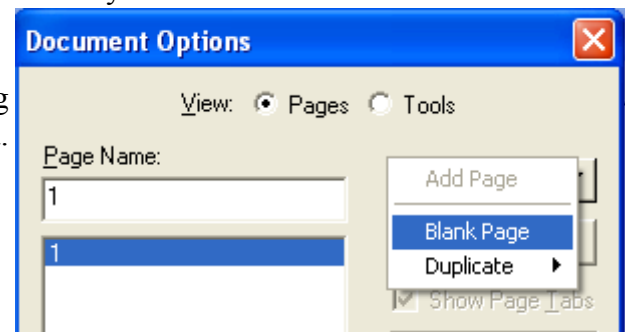   a) Create any circle and a point P that is not on the circle.
    b) Select ONLY the circle and measure its radius (under the Measure menu).
    c) Select the radius measurement and the point P. Under the Construct menu, choose "Circle By Center+Radius."

II. Create a blank sketch with 7 pages.
  A. Open Geometer's Sketchpad and create a sketch that has 7 pages. Do this by selecting "Document Options" under the "File" menu.
  B. Click the "Add Page" button and select "Blank Page." (see picture)
  C. Do this until you have 7 pages. Then click "OK."

III. Copy a segment
  A. On Page 1, create segment AB (if necessary, re-name the points so that it is segment AB).
  B. Use the construction tools to construct a copy of segment AB. Name this segment XY.
  C. Use the "Hide" command (under "Display") to hide the construction marks so only the segment and its copy are displayed.

IV. Copy an angle and make an angle bisector.
  A. On Page 2, create angle ANG.
  B. Use the construction tools to copy angle ANG. Call the copy angle LES.
  C. Hide the construction marks.
  D. Construct the angle bisector of ANG. Call it ray NO.
  E. Hide the construction marks.

V. Construct a perpendicular bisector.
  A. On Page 3, create segment BI.
  B. Construct the perpendicular bisector of BI.

    C. Construct the midpoint M of BI.

    D. Hide the construction marks.

VI. Construct a perpendicular.

    A. On Page 4, create a line ME and a point P.

    B. Construct line YU perpendicular to line ME and passing through P.

    C. Hide the construction marks.

VII. Construct a parallel.

    A. On Page 5, create a line US and a point Q.

    B. Construct line WE so it is parallel to line US.

    C. Hide the construction marks.

VIII. From the book

    A. On Page 6, use Sketchpad to do one of the constructions from today's homework.

    B. Make a text label that tells me what problem you did.

    C. Hide the construction marks.

IX. From the quiz.

    A. On Page 7, use Sketchpad to reproduce the figure from Problem 3 of the quiz. You may use a ruler and protractor to find measurements if that helps.

    B. Hide the construction marks.

X. Save the file.

    A. Save your file as "geo36LastnameFirstname.gsp", where Lastname is *your* last name and Firstname is *your* first name.

    B. E-mail the file to Mr. Dunigan AtLee at aatlee@cm.edu.gt. with "Geometry 3.6" as the subject line.