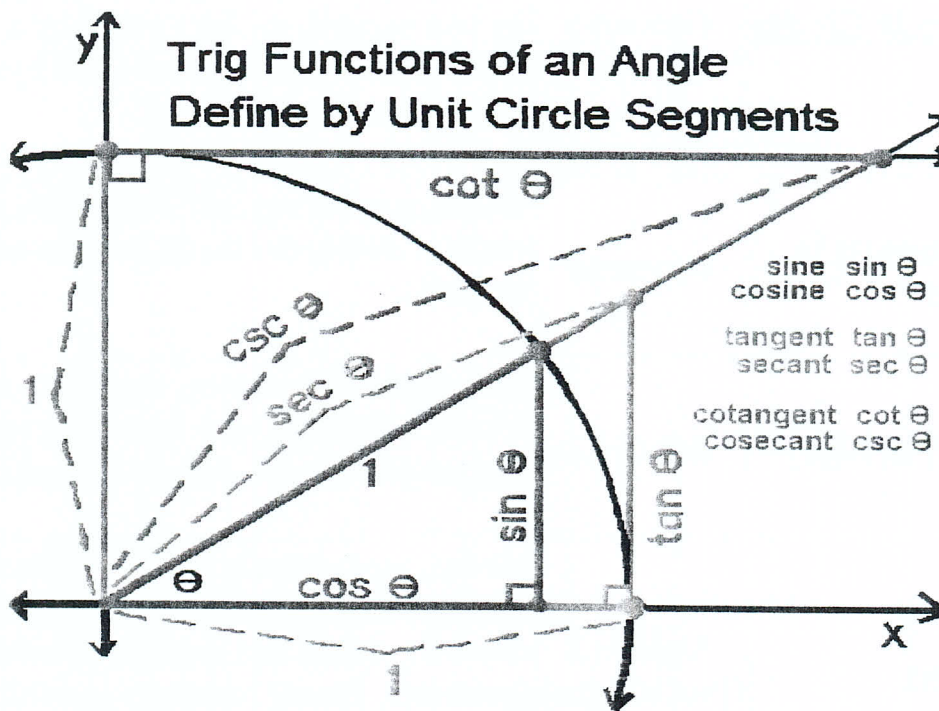


- *The Geometer's Sketchpad* now offers primary school teachers many opportunities to deepen their students' understanding of important mathematical ideas across the curriculum. In addition to the many geometry-related possibilities, I will share some activities and models for developing students' number sense, their understanding of measurement, and their algebraic thinking.
- *The Geometer's Sketchpad* is a software tool well-suited for the interactive study of number and early algebra concepts in grades 3 and higher. This talk will showcase prebuilt models that teachers with no prior Sketchpad experience can use in their classrooms.
- Don't let the lack of time or software experience stop you and your students from enjoying the benefits of this amazing teaching tool. Both of these drawbacks can be easily remedied by utilizing already prepared exploration files with "simple to use" directions. An accompanying worksheet for student explorations will help to keep the students focused and on task



Title	Course	Description
<b><u>Hitting the Slopes with Ski Bird</u></b>	Algebra 1	Help students to understand the concept of slope and equations of lines. Works well as a class demonstration.
<b><u>Examining Angles in Polygons</u></b>	Geometry	Help students to discover or reinforce the angle formulas associated with polygons.
<b><u>Quadrilaterals</u></b>	Geometry	Investigate the parallelogram, rectangle, square, rhombus and kites trapezoid.
<b><u>Transformations</u></b>	Geometry	Investigate reflections, translations, glide reflections, dilations (90°, 180°, 270° or any angle) and rotation of figures. Applications included on several pages. Suitable at various grade levels.
<b><u>Examining Angles in Circles</u></b>	Geometry	Investigate inscribed angles, angles formed by a tangent and chord, angles formed by intersecting chords, angles formed by two secants, angles formed by a tangent and a secant, and angles formed by two tangents.
<b><u>Examining Segments in Circles</u></b>	Geometry	Investigate the segment relationships in circles relating to chords, secants and tangents.
<b><u>Trigonometric Functions</u></b>	Algebra 2	Investigate sine, cosine, tangent, cosecant, secant, cotangent, sine inverse, cosine inverse, and tangent inverse function graphs.
<b><u>Functions</u></b>	Algebra 2 (PreCalculus)	Investigate constant, linear, quadratic, cubic, square root, cube root, absolute value, rational, natural log, and exponential functions. Parent functions and full form functions for modification are present.

# Overview

## Geometer's Sketchpad

### TOOLS



Arrow Tool



Point Tool



Circle Tool



Line Tool

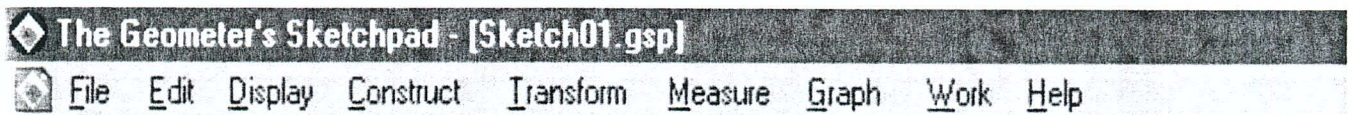


Text Tool



Information Tool

### DISPLAY OPTIONS



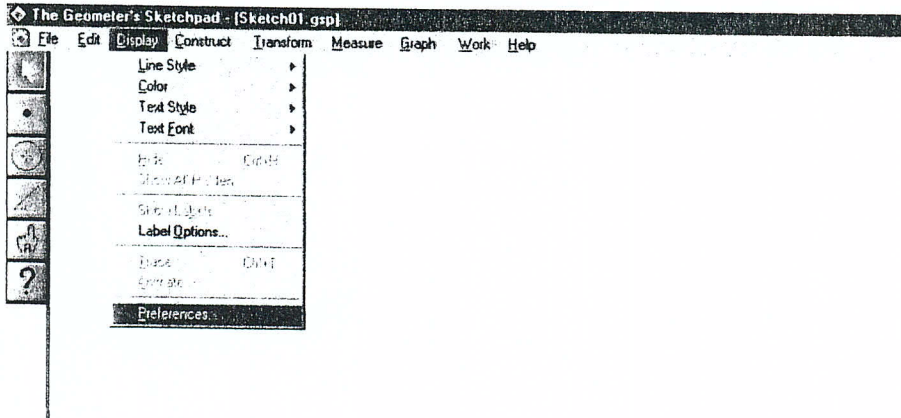
The menus available are:


- File
- Edit
- Display
- Construct
- Transform
- Measure
- Graph
- Work
- Help

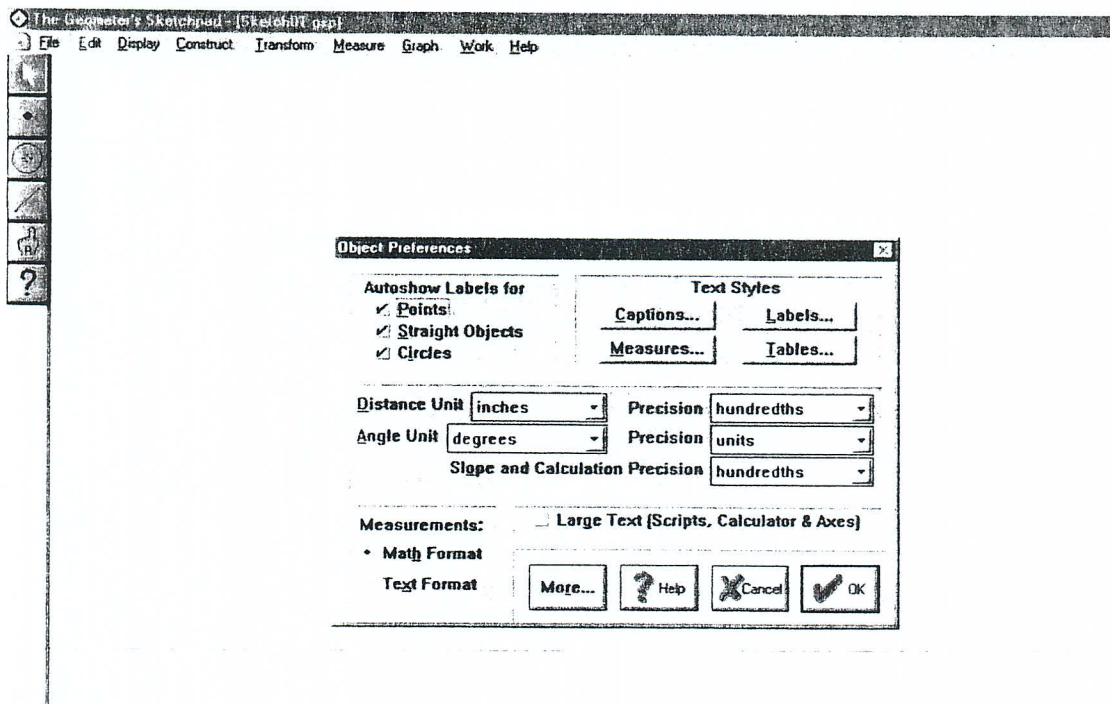


## LABELS - Turning labels on

1. Click the “**Display**” menu
2. Choose “**Preferences**”

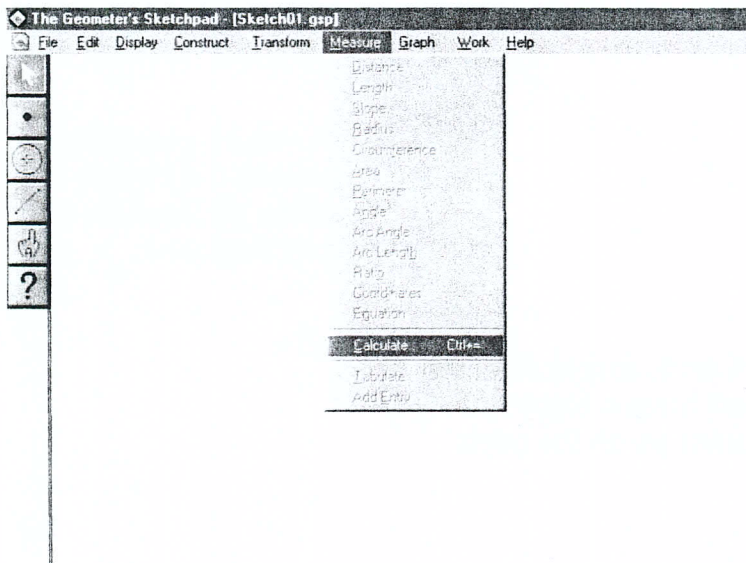


3. A menu called “**Object Preferences**” appears
4. In the upper left corner, choose Autoshow Labels for “**points,**” “**straight objects,**” and “**circles**” (all 3 options should be checked)
5. Click 

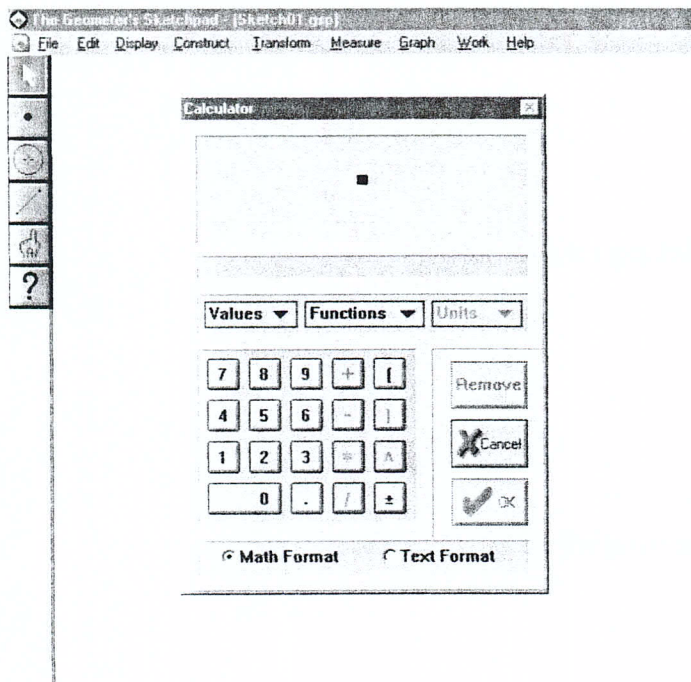



## USING THE CALCULATOR

1. Click the “**Measure**” menu
2. Choose “**Calculate**”



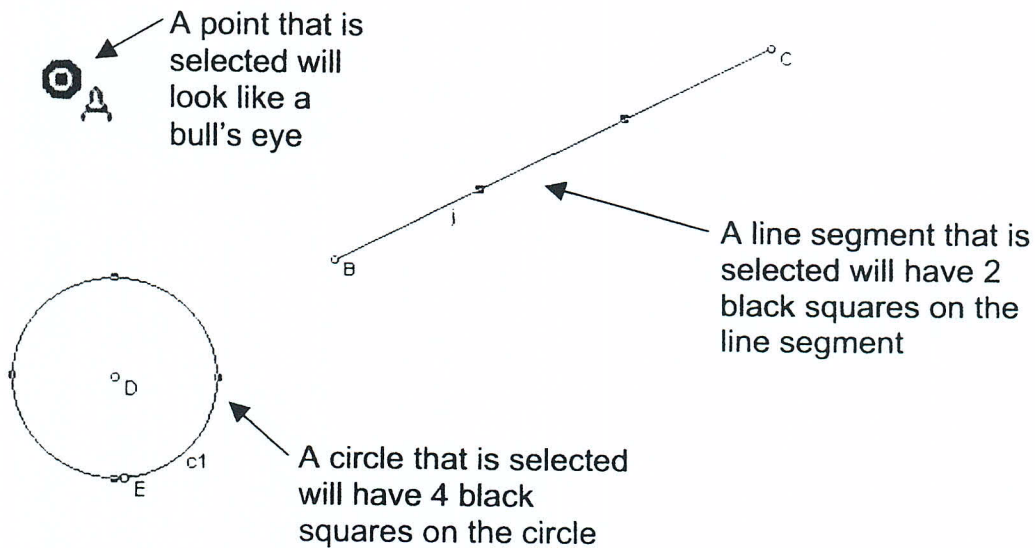
3. The “**Calculator**” appears



4. Use the calculator by clicking on the appropriate buttons. Click  to calculate the answer. The calculator will disappear, and your calculation will appear in the upper left section of the screen.

## SELECTING OBJECTS

Objects will need to be selected in order to perform tasks.



### To select objects:

1. Choose the arrow tool
2. Click on the object

### To select multiple objects:

1. Choose the arrow tool
2. Hold down shift when clicking on the objects

**OR**

1. Choose the arrow tool
2. Draw a dotted line box around all of the objects

# Trig Functions of an Angle Define by Unit Circle Segments

