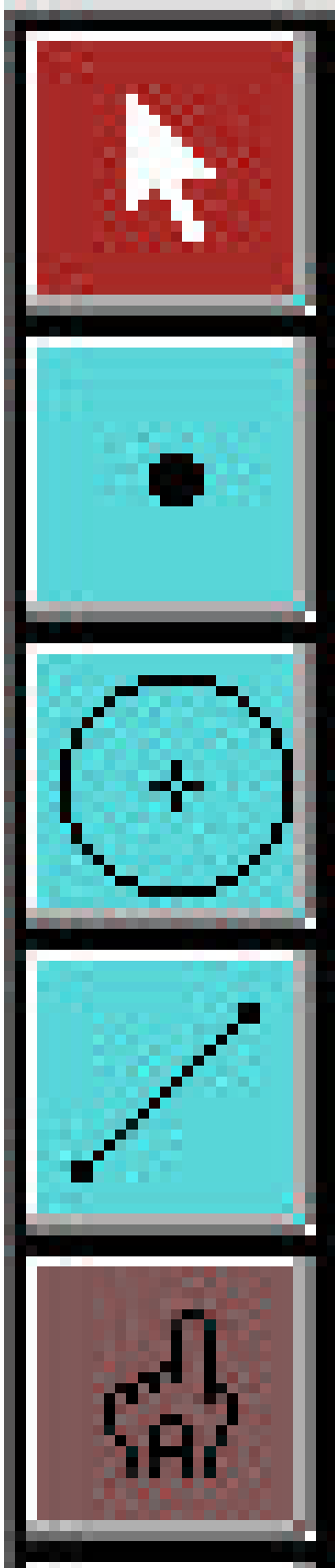


Geometer's Sketchpad



Selection Tool

- always deselect before selecting
- click, hold and drag to move an object
- hold the shift key while selecting more than one object

Point Tool

- click on the sketch pad to create a point
- to create a “special” point move to the location, check the command line then click - always check the construction by dragging the point

Circle Tool

- click, hold and drag on the sketch pad to create a circle
- circles are created with one control point on the circumference and a centre point

Line Segment Tool

- click, hold and drag on the sketch pad to create a line segment
- click, hold and drag on the tool to change it to a ray or line tool

Text Tool

- click, hold and drag on the sketch pad to create a text box - then start typing
- show/hide a label by clicking on the object
- change a label by clicking on the label

Geometer's Sketchpad

What do I need to select before constructing a ...?

- | | |
|------------------------------|--|
| Midpoint | ... one line segment |
| Point of Intersection | ... exactly two objects |
| Line Segment | ... exactly two points |
| Parallel Line | ... one point <i>and</i> one line segment (line or ray) |
| Perpendicular Line | ... one point <i>and</i> one line segment (line or ray) |
| Angle Bisector | ... exactly three points (the second point is the vertex of the angle) |
| Circle | ... one point for the centre <i>and</i> one line segment for the radius <u>or</u>
... one point for the centre <i>then</i> one point on the circle |
| Polygon Interior | ... <i>all</i> of the vertices (selected in order) |
| Circle Interior | ... one circle (select the circumference) |

Geometer's Sketchpad

What do I need to select before measuring the ...?

Distance between two points ... *exactly two points*

Length of a line segment ... one line segment

Slope of a line segment ... one line segment

Angle ... *exactly three points (the second point is the vertex of the angle)*

Circumference or area of a circle ... *the circle or the interior of the circle (if it has been constructed)*

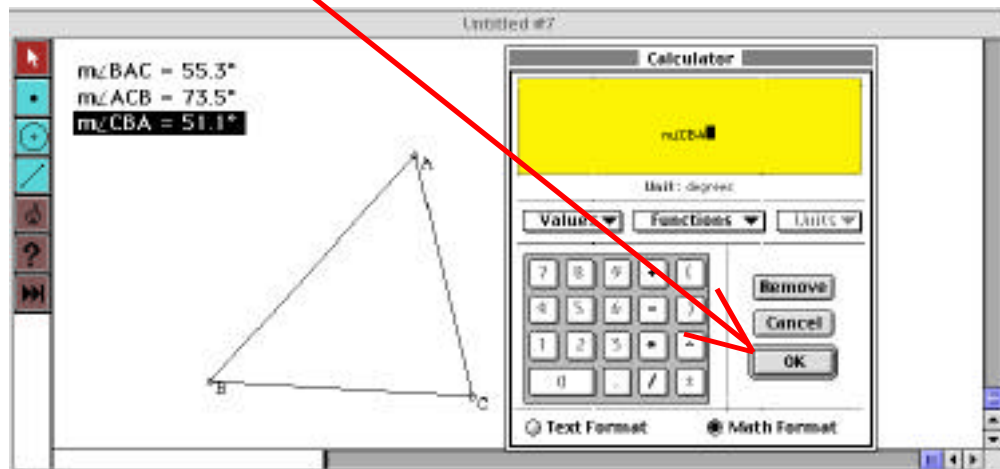
Perimeter or area of a polygon ... *the interior of the polygon (which must first be constructed)*

Coordinates of a point ... one point

Geometer's Sketchpad

How do I make a calculation?

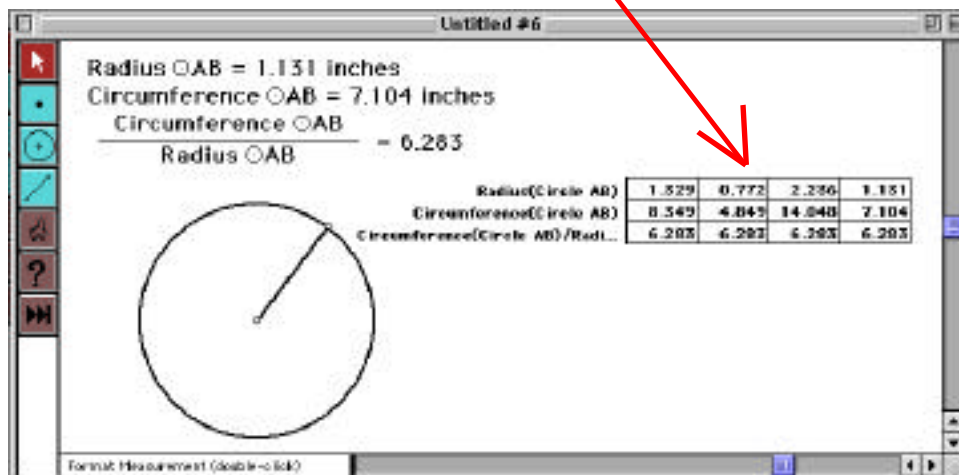
1. Measure anything that will be part of the calculation.
2. Under **Measure** choose **Calculate**.
 - *a calculator screen will appear*
3. Enter the calculation by clicking on one of the calculator keys or one of your measurements.
4. When you are finished entering the calculation click on **OK**.



Geometer's Sketchpad

How do I make a table?

1. Measure and calculate anything that will be in the table.
2. Deselect then hold the shift key while selecting all of the measurements and calculations that will be in the table.
3. Under **Measure** choose **Tabulate**.
 - *a table will appear*
4. To add an entry, drag to change the sketch then double click on any number in the table and the new data will appear.



Geometer's Sketchpad

How do I perform a rotation?

1. **Select a point.**
 - this determines the centre of the rotation
2. Under **Transform** choose **Mark Center.**
 - *watch the point!*
3. **Select an angle.**
 - this determines the angle of the rotation
4. Under **Transform** choose **Mark Angle.**
 - *watch the angle!*
5. **Select everything you want to rotate.**
 - remember to include points if you want them rotated
6. Under **Transform** choose **Rotate.**
 - in the dialogue box choose **Marked Angle** to use the angle you marked or **Fixed Angle** to enter your own angle of rotation measurement.

7. **Choose OK.**

What happens to the shape and size when a figure is rotated?

Geometer's Sketchpad

How do I perform a translation?

1. **Select a start point *and* an end point.**
 - this determines the direction and magnitude (size) of the translation
2. Under **Transform** choose **Mark Vector.**
 - *watch the path between the points!*
3. **Select everything you want to translate.**
 - remember to include points if you want them translated
6. Under **Transform** choose **Translate.**
 - in the dialogue box choose By Marked Vector
7. Choose **OK.**

What happens to the shape and size of a figure when it is translated?

Geometer's Sketchpad

How do I print a file?

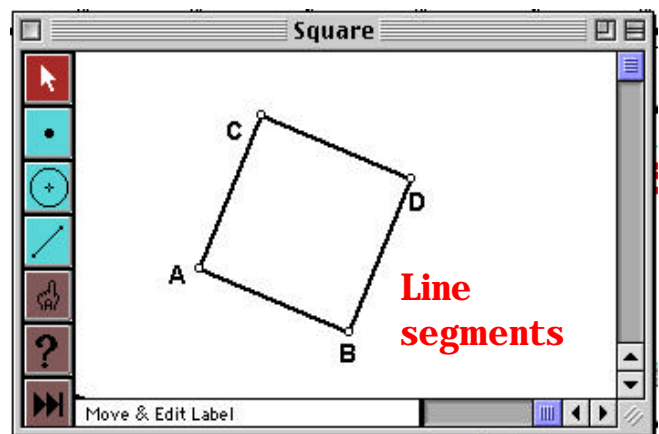
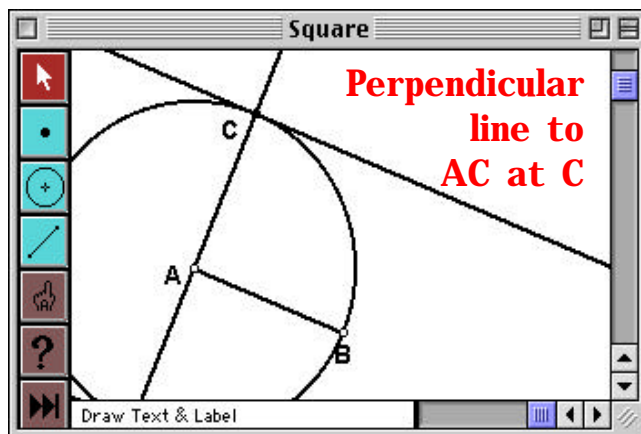
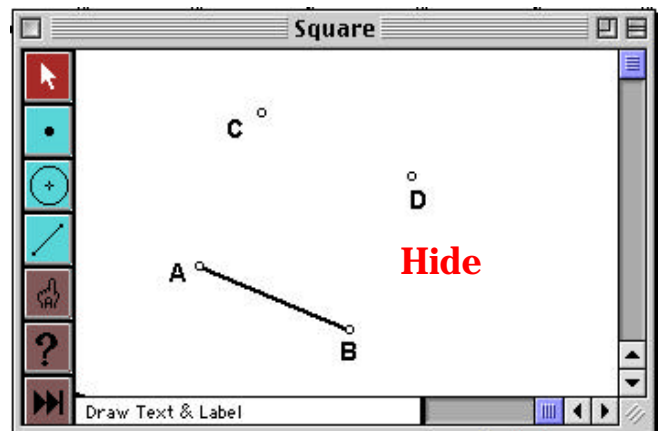
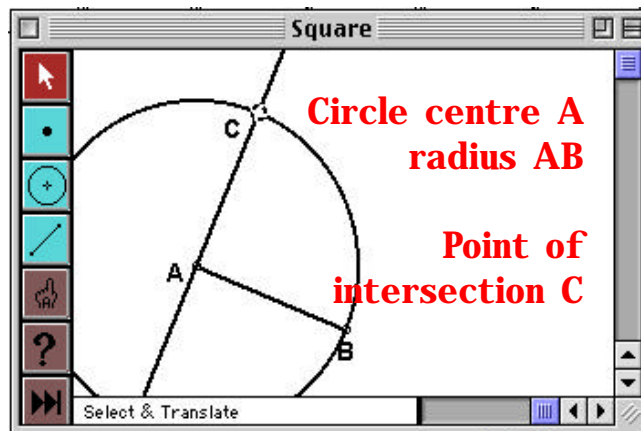
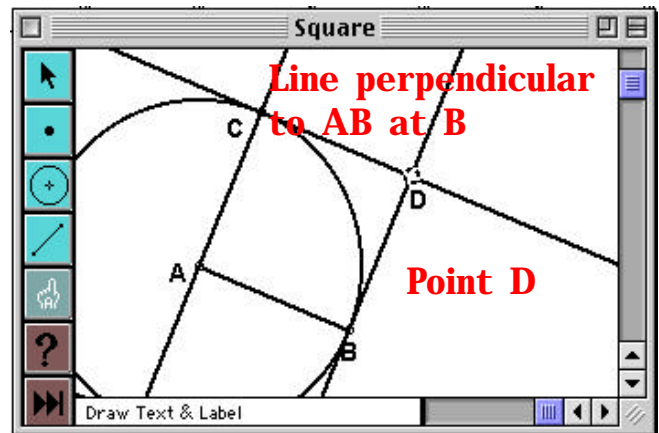
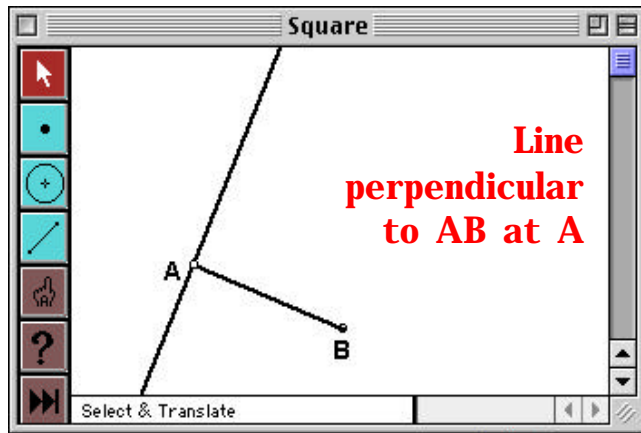
1. Under **File** choose **Print Preview**.
2. Click in the **Scale to Fit Page** box to turn it on.
3. Make sure your printer is ready then choose **Print**.



Does your sketch include a text box with your sketch title, your name and the date?

Geometer's Sketchpad

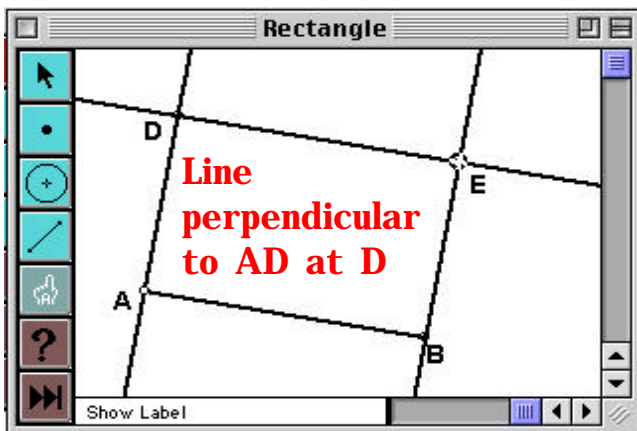
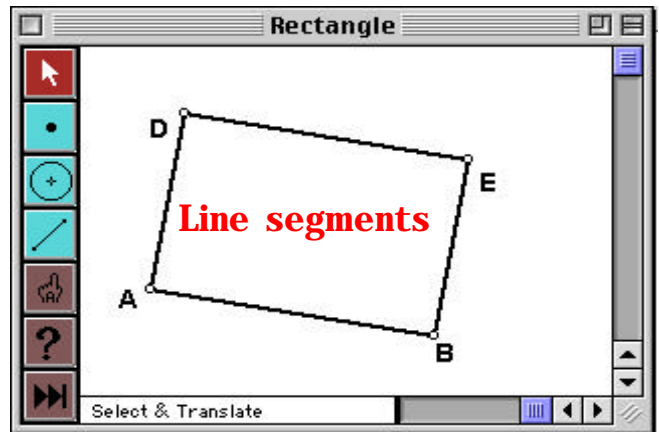
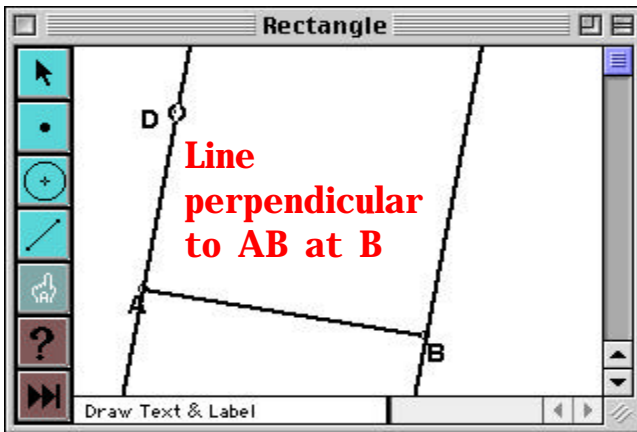
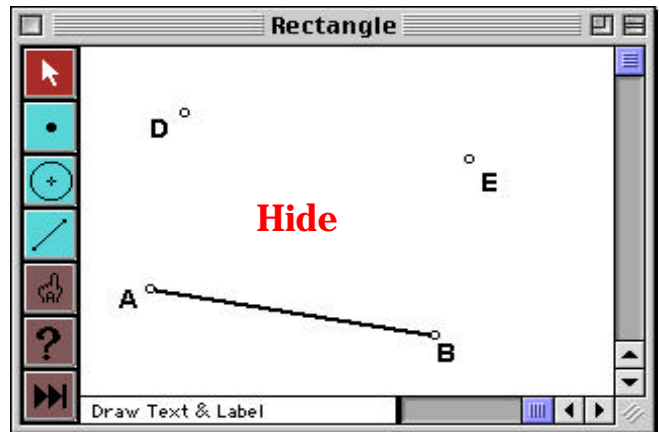
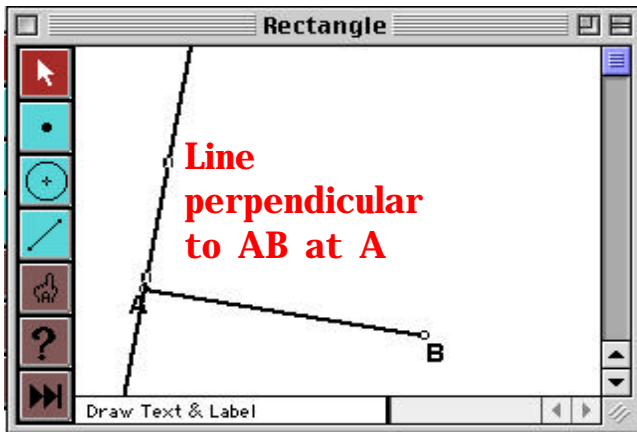
How do I construct a square?



How would you construct a square using rotations?

Geometer's Sketchpad

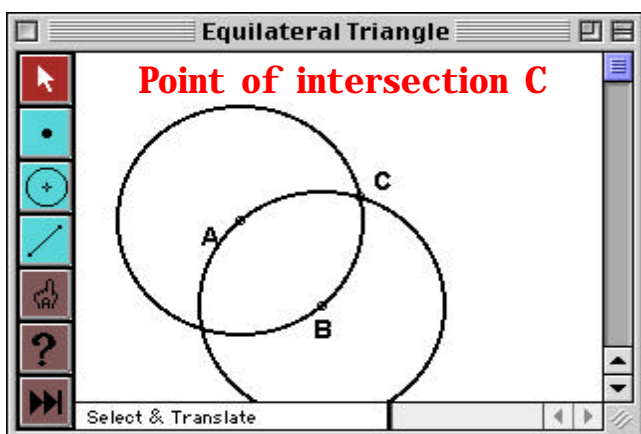
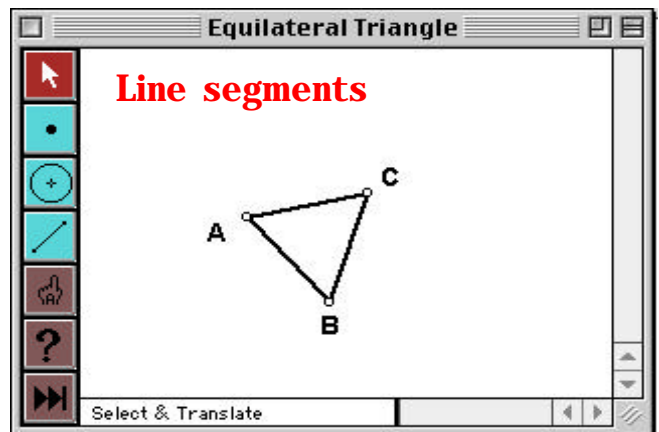
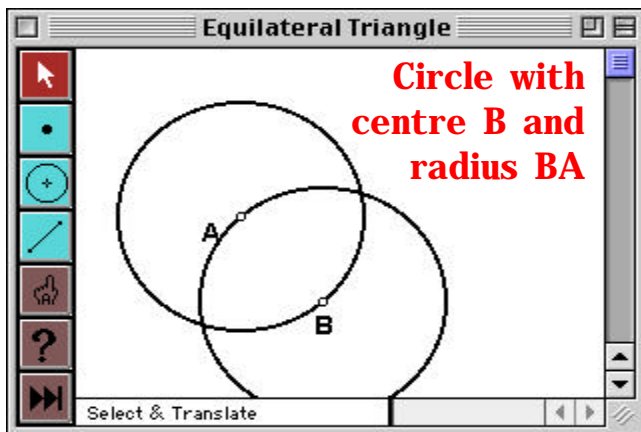
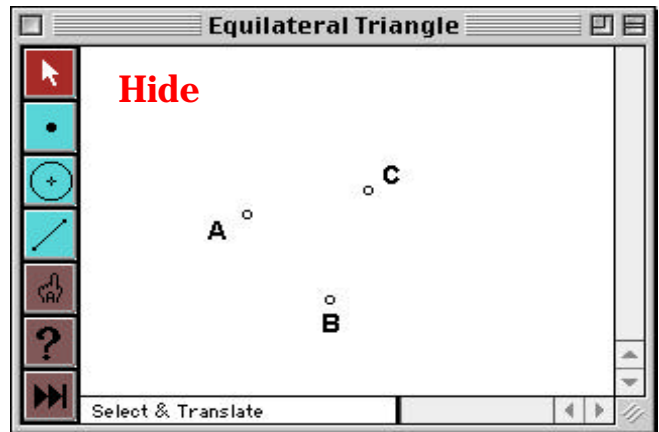
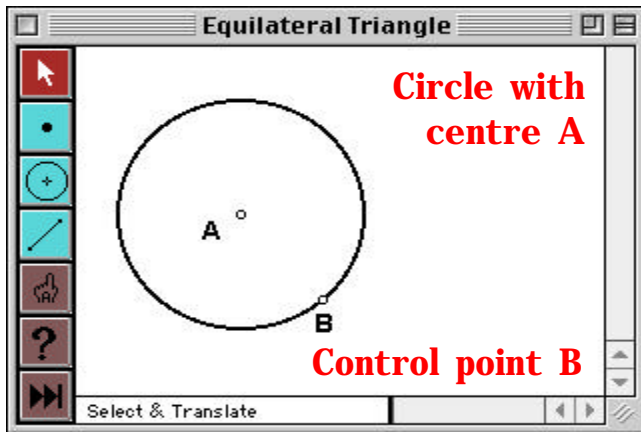
How do I construct a rectangle?



Drag each vertex to check your construction!

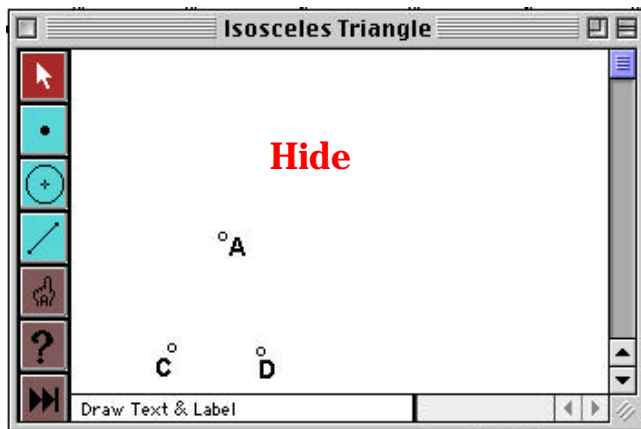
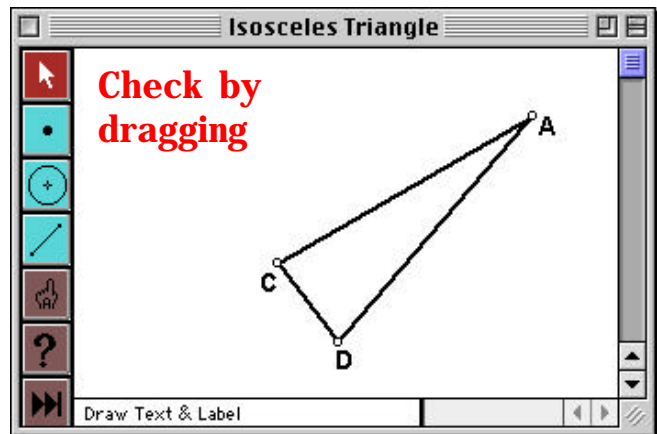
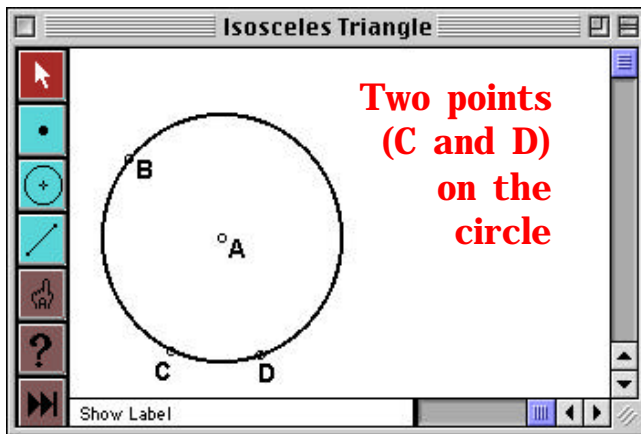
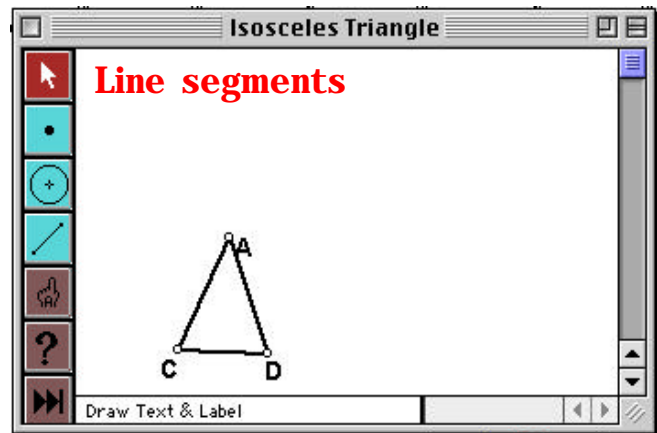
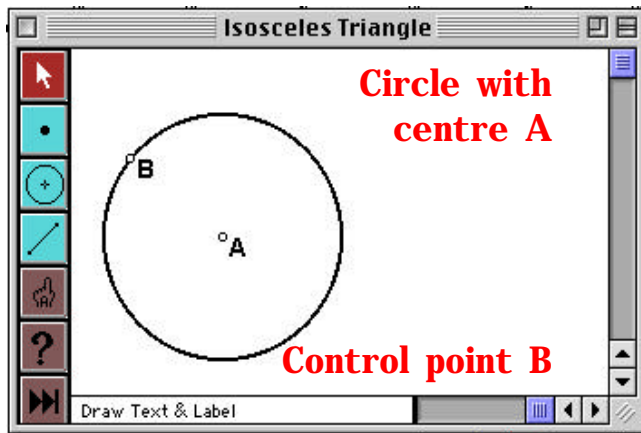
Geometer's Sketchpad

How do I construct an equilateral triangle?



Geometer's Sketchpad

How do I construct an isosceles triangle?



Drag each vertex to check your construction!

Geometer's Sketchpad

How do I construct a right-angled triangle?

