Finding a Rational Number Between Two Rationals
Evaluating a Number to a Power
Radicals
Percent
Mean and Median Box-and-Whisker Plots
Probability
Evaluating Algebraic Expressions Evaluating Functions
Plotting Points on a Coordinate Plane
Graphing Linear Equations
Graphing Direct and Inverse
Variations Solving Equations by Graphing
Slope
Scatter Plots Best-fitting
Lines
Composition of Function
Solving Inequalities Shading Inequalities
Using Formulas
Systems of Equations
Graphing Systems of Inequalities
Solving Quadratic Equations by Graphing Graphing
Exponential Functions
Graphing Rational Functions Graphing Radical Functions
Absolute Value Inequalities
Scatter Plots Linear Regression
Random Integers
Mean and Median Box-and-Whisker Plots
Histograms System of Equations
Matrix Operations Matrix Solutions to a System of Equations
Enter Lists
Enter Programs

The Geometer's Sketchpad Checklist

Now that you have had a chance to explore on your own with Sketchpad, you can start keeping track of your expertise using this checklist. Your teacher may give you time to share and exchange your checklist skills with other groups. You may also have time later on in the year to update this list to keep track of your new skills.

Check off what you can do as you learn. These tasks are in no particular order and you may not learn some of them until later on in the year. If you have no idea how to start on a task, skip it and go on to the next one. Your goal is *not* to check off all the skills; just check off as many as you can.

Novice: 0–20 checked
Apprentice: 20–40 checked
Expert: 40–60 checked

1. Construct a triangle. Make sure that it stays a triangle as you drag different parts of it around on the screen.

2. Select everything using the **Select All** command.
3. Select segments and points using the **Selection Arrow** tool.
4. Deselect an individual object, keeping the others selected.
5. Select a few objects in the same part of the screen with the **Selection Arrow** tool, using a selection rectangle.
6. Move a single object to a different part of the screen.
7. Contruct a circle.
8. Construct a line.
9. Construct a ray.
10. Label a point, then hide the label.
11. Label circles, lines and segments.
12. Move and change an object's label.
13. Delete an object.
14. Hide an object.
15. Construct an angle and measure it.
16. Make a **Hide/Show** button.
17. Construct a golden rectangle. Make sure it stays a golden rectangle as you drag different parts of it around the screen.
18. Use the **Text** tool to create a caption displaying your name.
19. Measure the slope of a line.
20. Measure the circumference of a circle and calculate its radius.
21. Change the text style of a caption.
22. Measure the three angles of a triangle and use Sketchpad's Calculator to find their sum.
23. Draw an angle and then construct its bisector.
24. Construct a line perpendicular to another line through a point not on the line.
25. Construct a line parallel to another line through a point not on the line.
26. Tessellate your screen with regular hexagons. Make sure the tessellation stays intact no matter how you drag or distort it.
27. Draw a circle and construct a second circle that is always tangent to the first circle.
30. Measure the length of a segment.
31. Animate a point around a circle.
32. Construct an animated car that rolls down a road.
33. Construct a square that stays a square no matter which parts of it you drag around.
34. Construct an equilateral triangle that stays equilateral no matter which parts of it you drag around.
35. Create a table of values.
36. Add entries to a table using the keyboard, the mouse, and the Graph menu.
37. Change the length of a segment.
38. Close a document.
39. Size a window so that you can see two windows at the same time.
40. Construct the midpoints of the sides of a triangle.

44. Dilate a triangle using the **Dilate** command.
45. Reflect an object across a line.
46. Construct a point that traces a trigonometric ratio.
47. Make a **Custom** tool that constructs a square.
48. Trace the locus of a point.
49. Animate a traced object.
50. Show the *x*-*y* grid.
53. Construct the interior of a circle and shade it with a color of your choice.
54. Draw a polygon and construct its interior.
55. Measure the area of a polygon.
56. Measure the perimeter of a polygon.
57. Rotate an object 39° counterclockwise.
58. Rotate an object 95° clockwise.
59. Translate an object by a specified vector.
60. Insert a picture from another file and create an action button to display the picture.