

Time Estimate: 30 minutes

Open a new sketch to work in.

1. Go to the Edit Menu and select Preferences. In the dialog box that opens, go to the angle precision pull down menu and select units.
2. Draw any triangle. Measure the angles and sides of the triangle.
3. Draw a second triangle. Measure its angles and sides. Now try to drag the vertices of the second triangle so that its angle measures are exactly the same as the angle measures of the first triangle. Try to create another triangle that has the same angle measures but different side lengths in the following way.
4. Using the arrow tool, draw a box around the first triangle so that it is completely highlighted.
5. Go to the Transform Menu and select Dilate.
6. The dialog box will offer you the opportunity to dilate the triangle by a fixed ratio and will show a lightly drawn segment in the highlighted triangle. Click OK.
7. Measure the angles of the smaller triangle. To measure the side lengths you will want to click on the two points that define each side of the smaller triangle (in order that the computer name them consistently).
8. Do the two triangles have the same angle measures? the same side measures?
9. Use this method to construct a triangle that is larger than the first triangle.
10. Save this file as a combination of your names and AAA in the Triangle folder.