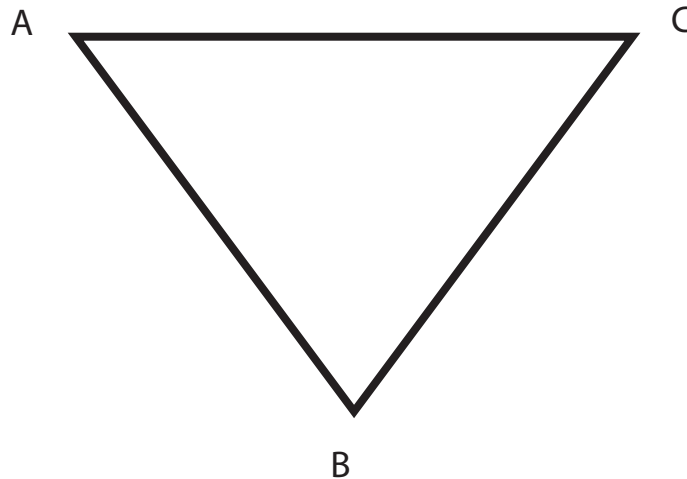


Compass and straight-edge construction: Circumscribed triangle NAME:

Compass and Straight-edge Construction: Given a triangle, draw a circle that circumscribes the triangle. (This means to draw a circle around the triangle so that all three vertices are on the circle.)

This will involve finding the center of the circle first. We do that in steps 1 and 2 below. Step 3 uses the fact that the radius can be thought of as the distance from the center to any of the three vertices. The instructions deal with particular vertices and sides. After you get the idea of the construction, you may be able to use different sides and vertices.



Step 1: Construct the perpendicular bisector of side AB. Use the very point of each vertex when you place the compass point down.

Step 2: Construct the perpendicular bisector of side BC.

Step 3: The intersection of the two lines drawn in steps 1 and 2 is the center of the circle. Label it O. Since A should be on the circle, the radius of the circle we want should be equal to the length OA. Set your compass with its center point on O and its pencil point on A. Rotate your compass to draw the circle. If done properly, the circle should also go through both of the other vertices.