Perpendicular Bisectors (of sides)

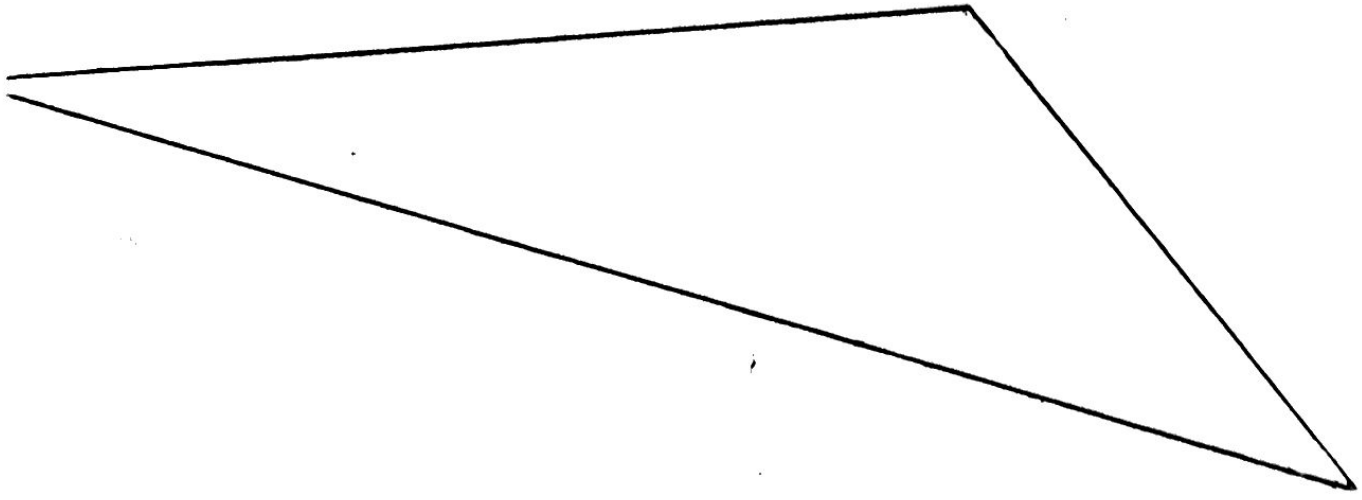
Use a Compass

Part 1: Pg 46.

1. Use the "perpendicular bisector" construction to construct a perpendicular bisector for all three sides. Extend each until it crosses the other two.
2. Go down and read the interesting facts.

Part 2: Pg 273

1. Put your compass's steel point on the point of concurrency. Put the pencil point on any of the three vertices. This is the radius of a special circle.
2. Draw this "Circumscribed Circle".



Interesting Facts:

1. The perpendicular bisectors of the sides of a triangle are concurrent.
2. The point of concurrency is equidistant from all three vertices of the triangle. This is the method for finding a point that is equidistant from three other points.
3. This point of concurrency is the center of a very special circle called a "circumscribed circle". All three vertices of the triangle are on the circle.
4. Now go back and do Part 2

Angle Bisectors

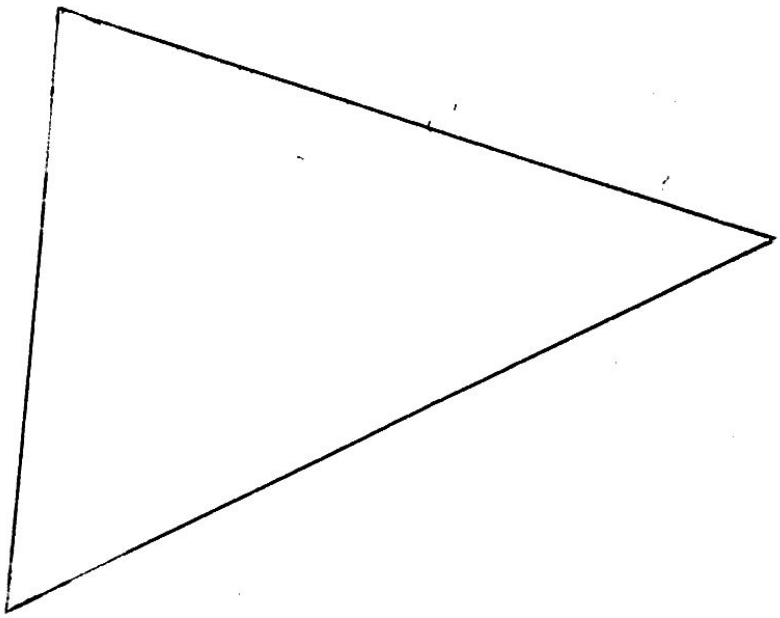
Use a Compass!

Part 1: Pg 47

1. Use the "angle bisector" construction to draw all three angle bisectors.
2. Go down and read the interesting facts.

Part 2:

1. Put your compass at the point of concurrency. Adjust your pencil point arm so when you draw a circle, it fits perfectly inside the triangle.
2. Draw the circle.



Interesting Facts:

1. The angle bisectors are concurrent.
2. The point of concurrency is the center of a very special circle. The distance from the point of concurrency to each side of the triangle is equal. This means this point is the center of an "Inscribed Circle" (the circle is inside the triangle but touches each side in exactly one point).
3. Now go back up and do Part 2.