

1. Use the line segment tool to construct a triangle
2. Use the angle bisector tool to construct angle bisectors of each angle. Notice that they intersect at a point. This point is known as the *incenter*.
3. Using the pointer tool, adjust the triangle so that the none of the angle bisectors are not nearly perpendicular to the sides
4. Use the perpendicular line tool to construct a line perpendicular to each line edge of the triangle that goes through the incenter.
5. Use the point tool to label the intersections of the perpendiculars with the edges of the triangle
6. Use the 3-point circle tool to construct a circle whose edges coincide with the inersection points.
7. Use the pointer tool to move the triangle around. What happens to the circle?

1. Use the line segment tool to construct a triangle.
2. Using the perpendicular bisetector tool, click on both endpoints of each triangle edge to construct their perpendicular bisectors Notice that they intersect at a point. This point is known as the *circumcenter*.
3. Use the 3-point circle tool to construct a circle whose edges coincide with the vertices of the triangle.
4. Use the pointer tool to move the vertices of the triangle around. What do you notice about the circle?

1. Use the line segment tool to construct a triangle.
2. Use the perpendicular line tool to construct the three altitudes of the triangle. An altitude is a perpendicular line that passes through the vertex opposite it. Notice that they intersect at a point.
3. Use the pointer tool to move the vertices of the triangle around. What do you notice about the circle?