## Project: Circumscribed Triangle Radius Problem

The triangle in the figure below is circumscribed by a circle with radius $r$.
Find the value of $r$.


Any triangle can be circumscribed by a circle


Find a formula for the radius of the circle, given the three sides of the triangle.
Show that, if you haven't already done so, that $r=\frac{a}{2 \operatorname{sinA}}$.

Find a similar expression for $r$ using angle $B$ and side $b$; then angle $C$ and side $c$. Hence prove the sine rule

