



The diagram shows triangle ABC , with $AB = x$ cm, $AC = y$ cm and angle $BAC = 60^\circ$. It is given that the area of the triangle is $(x+y)\sqrt{3}$ cm².

(a) Show that $4x + 4y = xy$. **[2]**

When the vertices of the triangle are placed on the circumference of a circle, AC is a diameter of the circle.

(b) Determine the value of x and the value of y . **[4]**