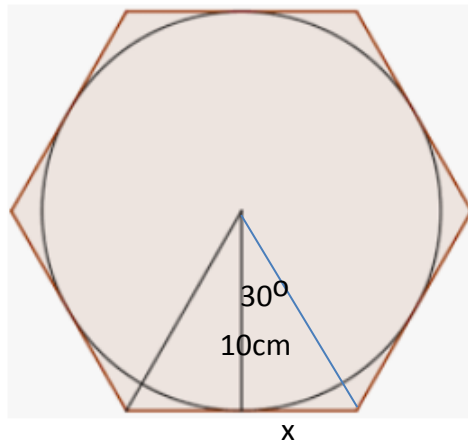


March 12<sup>th</sup>

If the area of the inscribed circle of a regular hexagon is  $100\pi \text{ cm}^2$ , find the area of the hexagon.



The radius of the circle is 10cm

Using trig,  $x = \tan(30) \times 10$

$$x = \frac{10\sqrt{3}}{3}$$

$$2x = \frac{20\sqrt{3}}{3}$$

Area of 1 triangle:  $0.5 \times \frac{20\sqrt{3}}{3} \times 10 = \frac{100\sqrt{3}}{3}$

Area of Hexagon (6 triangles) =  $200\sqrt{3} \text{ cm}^2$