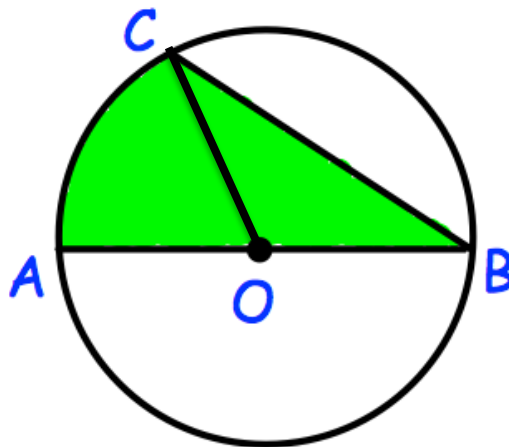


August 9th

The circle with centre O has diameter AB with length 4cm and angle ABC = 30°.

Find the shaded area.



Divide the area into a triangle OBC and sector OAC

Radius OB = 2cm

Since angle ABC = 30°,

BOC = 120° and AOC = 60°

Area of triangle OBC = $\frac{1}{2} \times 2 \times 2 \times \sin 120 = \sqrt{3}$

Area of sector OAC = $\frac{1}{6} \times \pi \times 2^2 = \frac{2}{3}\pi$

Total shaded area = $\sqrt{3} + \frac{2}{3}\pi \approx 3.83 \text{ cm}^2$