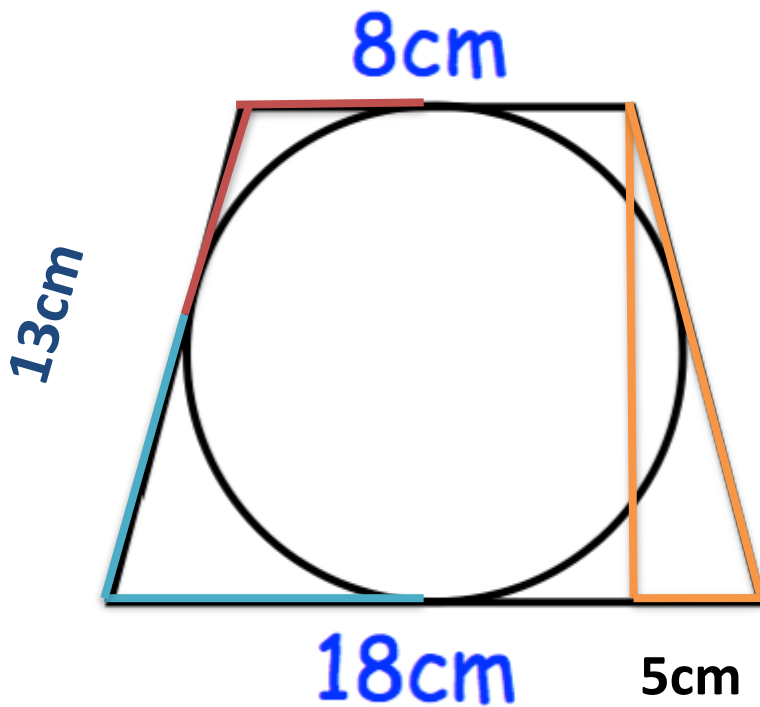


January 6th



The 2 red lines are equal length, and are 4cm

The 2 blue lines are equal length and are 9cm.

(Since 2 tangents to the same circle are equal in length)

The length of the diagonal is therefore $4 + 9 = 13$ cm.

Now working in the orange right angled triangle:

$$\text{Pythagoras } 13^2 - 5^2 = 144$$

$$\text{Hence the height of the trapezium} = \sqrt{144} = 12\text{cm}$$

Therefore the radius of the circle = 6cm

$$\text{Area of the circle} = \pi \times 6^2 =$$

$$\mathbf{36\pi \text{ cm}^2 = (113.097...\text{cm}^2)}$$