



- 23 The circumference of a circle is 8π inches. Find the area of the circle.

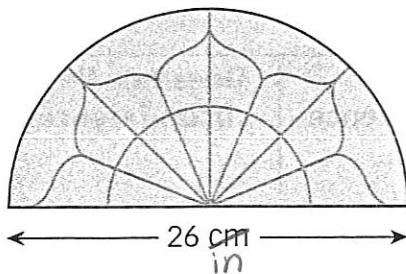
Show your work.

$$\begin{aligned} C &= \pi d \\ 8\pi &= \pi d \\ 8 &= d \\ 4 &= r \\ A &= \pi r^2 \\ &= \pi(4^2) \\ &= 16\pi \end{aligned}$$

Solution: 16π sq inches

- 24 The stained glass window below is a semicircle. What is the distance around the window? Use $\pi = 3.14$. Circle the letter of the correct answer.

- A 40.82 inches
 B 66.82 inches
 C 81.64 inches
 D 107.64 inches



Ari chose **D** as the correct answer. How did he get that answer?

Ari used the circumference of the whole circle and added that to 26

$$\begin{aligned} \text{Perimeter} &= \frac{1}{2}\pi d + 26 \\ &= \frac{1}{2}(3.14)(26) + 26 = 66.82 \text{ in} \end{aligned}$$

If you know the circumference of a circle, how can you find the radius?



Pair/Share

If you are given the circumference of a circle, can you always find its radius? If you know the area of a circle, can you always find the circumference?

How many lengths do you need to consider to solve this problem?



Pair/Share

Does Ari's answer make sense?