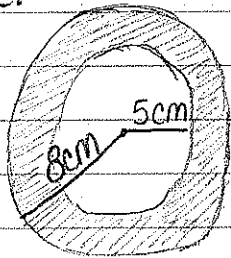


10.2

a.

(22)



$$\text{Area} = \pi \times r^2$$

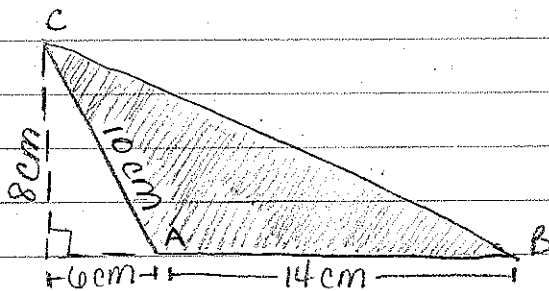
$$\begin{aligned} \text{Inner} &= \pi \times 5^2 \\ &= \pi \times 25 \\ &= 78.54 \text{ cm}^2 \end{aligned}$$

$$\begin{aligned} \text{Outer} &= \pi \times 8^2 \\ &= \pi \times 64 \\ &= 201.06 \text{ cm}^2 \end{aligned}$$

The Area of the shaded outer circle is  $122.52 \text{ cm}^2$

$$\begin{aligned} \text{shaded Region} &= \text{Outer} - \text{Inner} \\ &= 201.06 - 78.54 = 122.52 \text{ cm}^2 \end{aligned}$$

b.



$$\text{area} = \frac{1}{2}bh$$

$$b = 14 \text{ cm}$$

$$h = 8 \text{ cm}$$

$$a^2 + b^2 = c^2$$

$$a^2 + 6^2 = 10^2$$

$$a^2 + 36 = 100$$

$$-36 \quad -36$$

$$\sqrt{a^2} = \sqrt{64}$$

$$a = 8$$

$$\text{area shaded} = \frac{1}{2}bh$$

$$\frac{1}{2}(14 \text{ cm})(8 \text{ cm}) = 56 \text{ cm}^2$$

use Pythagorean theorem to solve for b

The area of the shaded triangle is  $56 \text{ cm}^2$ .