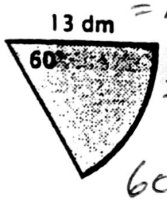
5. **Calculate the area of each sector**

a)

$A = \pi r^2$
$= \pi (7.5)^2$
$= 176.71 \text{ cm}^2$
half circle.

88.3 cm^3

b)

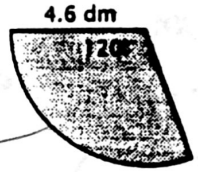


$A = \pi r^2$
$= \pi (13)^2$
$= 530.93 \text{ dm}^2$

$\frac{60}{360} = \frac{x}{530.93}$

$x = 88.49 \text{ dm}^2$

c)



$\text{Area} = \pi r^2$
$= \pi (4.6)^2$
$= 66.48 \text{ dm}^2$

$\frac{120}{360} = \frac{x}{66.48}$

$x = 22.16 \text{ dm}^2$

/3

6. **Calculate the area of a disc with perimeter 59.7 m.**

$A = \pi r^2$
$= \pi (9.5)^2$
$= 283.62 \text{ m}^2$

$C = 2\pi r$

$\frac{C}{2\pi} = r \rightarrow \frac{59.7}{2\pi} = 9.5 \text{ m}$

/2

7. **A circle has a radius of 21 cm. A central angle intercepts an arc of 11 cm on this circle. What is the area of the sector corresponding to this central angle?**

(1) $C = 2\pi r = 2\pi (21) = 131.95 \text{ cm}$

$\frac{11}{131.95} = \frac{x}{360}$ $x = 30°$

(2) $A = \pi r^2 = \pi (21)^2 = 1385.44 \text{ cm}^2$

$\frac{30}{360} = \frac{x}{1385.44}$

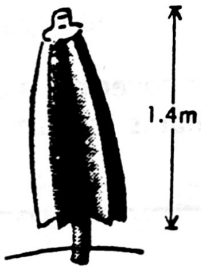
$x = 115.45 \text{ cm}^2$

/2

8. **The pole of a parasol is 1.4 m long. What is the area of this parasol when it is open?**

radius

$\pi r^2 = \pi (1.4)^2 = 6.16 \text{ m}^2$

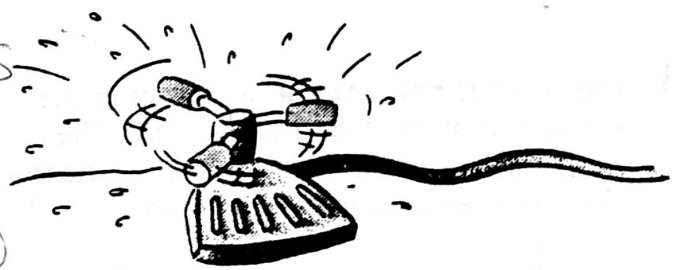


/2

9. **To water her lawn, Alice uses a rotating sprinkler which projects water to 5 m. Calculate the area of the watered surface.**

radius

$\pi r^2 = \pi 5^2 = 78.54 \text{ m}^2$



/2