

Textbook

P68

#1 a)  $A = \pi 4^2 = 50.24 \text{ cm}^2$

b)  $A = \pi 1^2 = 3.14 \text{ cm}^2$

c)  $A = \pi 10^2 = 314 \text{ cm}^2$

d)  $A = \pi 7^2 = 153.86 \text{ cm}^2$

$r = \frac{d}{2} = \frac{2}{2} = 1$

#2 a)  $A = \pi 15^2 = 706.5 \text{ mm}^2$

b)  $A = \pi 123.26^2 = 47706.11 \text{ mm}^2$

c)  $A = \pi 22.7^2 = 1618.61$

d)  $C = 200 \Rightarrow \frac{200}{2\pi} = \frac{2\pi r}{2\pi} \Rightarrow r = 31.85$

$A = \pi 31.85^2 = 3185.29 \text{ mm}^2$

e)  $A = \pi 61^2 = 11683.94 \text{ mm}^2$

f)  $C = 4.38 \Rightarrow r = 0.697$

$A = \pi 0.697^2 = 1.53 \text{ mm}^2$

$$\#3 \text{ a) } \frac{CA}{360} = \frac{\text{Sector}}{A = \pi r^2} \quad A = \pi 5^2 = 78.5$$

$$\frac{80}{360} = \frac{x}{78.5} \Rightarrow \text{Sector} = 17.44 \text{ cm}^2$$

$$\text{b) } \frac{250}{360} = \frac{x}{\pi 11.6^2} \Rightarrow \text{Sector} = 293.42 \text{ cm}^2$$

$$\text{c) } \frac{138}{360} = \frac{x}{\pi 3^2} \Rightarrow \text{Sector} = 10.83 \text{ cm}^2$$

$$\#4 \text{ a) } \frac{CA}{360} = \frac{\text{Sector}}{A}$$

$$\frac{70}{360} = \frac{15.5}{A} \Rightarrow A = 79.71 \quad r = \sqrt{\frac{A}{\pi}} = \sqrt{\frac{79.71}{\pi}} = 5.04 \text{ cm}$$

$$\text{b) } \frac{120}{360} = \frac{23}{A} \Rightarrow A = 69$$

$$\frac{69}{\pi} = \frac{\pi r^2}{\pi}$$

$$\sqrt{21.97} = \sqrt{r^2}$$

$$r = 4.69 \text{ dm}$$

$$\text{so } d = 9.38 \text{ dm}$$

$$\text{c) } \frac{140}{360} = \frac{47}{A} \Rightarrow A = 120.86$$

$$\Rightarrow r = 6.2 \Rightarrow C = 2\pi 6.2 = 38.94 \text{ cm}$$