



5

(a) $1 < x \leq 5$

$$x = 5$$

(b) (i) $\log_{10}(2^{1000}) \Rightarrow 2^{100} =$

$$= \log_{10} 1000 \times \log_{10} 2$$

$$= 0.903089$$

$$\Rightarrow \log_{10}(2^{100}) = 30.10299957$$

$$\therefore \log_{10}(2^{1000}) = \cancel{301.030} 301.030$$

(c) $r\theta = \text{sector}$

$$\therefore r30^\circ = 8 \text{ cm}$$

$$\frac{8}{30^\circ} = r$$

check: $\frac{4}{15} \times 30^\circ = 8 \checkmark$

$$r = \frac{4}{15} \text{ cm} = \cancel{0.3} 3\bar{3} \text{ mm}$$

(d) (i) $\frac{h}{2} \{ (a+h) + 2(a+h) + 3(a+h) \}$

$$\cancel{2 \{ 1.3 + 1.7 \}}$$

$$\frac{h}{2}$$

$$= 0.2 \times 1.3 + 2(1.7)$$

$$= 0.94 \times 12 = 11.28 \text{ m}^2$$