Question 5

a) $y = 2\sqrt{25-x^2}$

$x = -5 < x < 5$

$y \geq 0$

b) $\log_{10} 2^{1000}$

$= 1000 \log_{10} 2$

$= 301.030$

ii) 12 digits

c) $l = r\theta$

$= 8 = r \times \frac{\pi}{6}$

$r = \frac{8}{\frac{\pi}{6}}$

$\therefore r = 15 \text{cm}$

$\therefore r = 150 \text{mm}$

d) i) ~~scribble~~

$$\left(\frac{0+1.3}{2} \times 4\right) + \left(\frac{1.3+1.7}{2}\right) \times 4\right) + \left(\frac{1.7+0}{2} \times 4\right)$$

$$= 2.6 + 6 + 3.4$$

$$= 12 u^2$$

ii)