



$$a) A = \pi \int \left(\frac{x^2}{2} + y^2 = 8 \right) dx^2$$

$$\frac{x^2}{2} + y^2 = 8$$

when $y=0$

$$\frac{x^2}{2} = 8$$

$$x=4$$

$$A = \pi \int \left(\frac{x^2}{2} + y^2 = 8 \right) dx$$

when ~~when~~ $x=0$

$$= \pi \left[\frac{y^3}{3} \right]_0^4$$

$$\begin{aligned} y^2 &= 8 \\ y &= \sqrt{8} \end{aligned}$$

$$= \pi \left(\frac{64}{3} \right)^2$$

$$= 1429.7737 \text{ units}^3$$

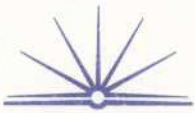
$$b) i) 0.25 \times 0.75 = 0.1875$$

$$ii) 0.25 \times 0.25 \times 0.25 = 0.015625$$

$$c) x = \frac{t-2}{t+2}$$

$$i) x = \frac{-3}{2}$$

= -1.5 displacement is -1 when $t=0$



ii)

iii) No, it is an unbroken graph