

'A Carbon Negative Company'

$$\text{a) } t = \frac{x}{10} \quad (1)$$

$$(1) \ y = 8 \left( \frac{x}{10} \right) - 4.9 \left( \frac{x}{10} \right)^2 + 10 \quad (1)$$

using the quadratic formula,  $\frac{x}{10} = 2.46(1685255)$  (1)

Thus  $x = 24.6$  years. (1)

$$\text{a) } y = \frac{4}{5}x - \frac{49}{1000}x^2 + 10 \quad (1)$$

$$\frac{dy}{dx} = \frac{4}{5} - \frac{49}{500}x \quad (1)$$

$$0 = \frac{4}{5} - \frac{49}{500}x \quad (1)$$

$$x = \frac{4 \times 500}{49 \times 5} \quad (1)$$

$x=8.2$  years,  $y=13.3$  tonnes (1)