Question 8

a)   1923.   18 koalas   1993   5000

$N = N_0 e^{kt}$ 78 yrs → 2001

$= 5000 e^{k \cdot 78\text{yrs}}$ $5000 e^{k \cdot 78}$

b) (i) P(A is person picked first) = $\dfrac{1}{5}$

(ii) P(order shown) = $\dfrac{5}{125}$

$= \dfrac{1}{25}$.

c) $y = f(t)$ 10 cm.

$y_1 = 2$ cm.