

(14)

$$t = 2n \rightarrow 400$$

$$t = 6n \rightarrow 25,600$$

$$P = Ce^{-kt}$$

$$400 = Ce^{-k(2)}$$

$$25,600 = Ce^{-k(6)}$$

$$\ln 400 = \frac{25,600 - Ce^0}{6k}$$

$$400 = Ce^{-2k}$$

$$\ln 400 = \frac{6u - e^{4k}}{4k}$$

$$\frac{\ln 400}{\ln c} = \frac{6u - e^{4k}}{4k} \rightarrow 103.97 \text{ l}$$

$$\frac{400}{e^{in(u)t}} = C$$

(b)

$$C = 50 \quad //$$

(c)

$$h(t) = 50 e^{(in(u)t)}$$

(d)

$$\ln(4.5) = \underline{5.382}$$

(inu)t

(e)

$$50,000 = 50 e$$

inut

$$\ln 1000 = e$$

$$\ln 1000 = \underline{(inu)t$$

$$\frac{\ln 1000}{\ln u} = t$$

$$\underline{6.6438 \ln u = t}$$

(16) $P = 5700$ millones

$$k = 20\% \rightarrow k = 0.02$$

$$P = ce^{kt}$$

$$5700 = ce$$

$$5700 = c$$

$$2(5700) = 5700 e^{0.02t}$$

$$2 = e^{0.02t} \rightarrow \ln 2 = 0.02t$$

$$\frac{\ln 2}{0.02} = t$$

$$34.65 = t$$

$$35 = t$$

a) se duplica en 2030

$$\frac{\ln 3}{0.02} = t$$

$$54.43 = t \rightarrow 55 = t$$

se triplica en 2050