Question 9 e)

(%i5) f:'diff(y,t) = (1/(10000))*(100-y);

$$\frac{d}{dt}y = \frac{100 - y}{10000} \tag{f}$$

(%i11) ode2(f,y,t);

$$y = \%e^{-\frac{t}{10000}} \left(100\%e^{\frac{t}{10000}} + \%c\right) \tag{\%o11}$$

(%i12) sol: ic1(%,y=30,t=0);

$$y = \%e^{-\frac{t}{10000}} \left(100\%e^{\frac{t}{10000}} - 70\right) \tag{sol}$$