

CHIEZE CHINOMBO FAITH

ALPO/ASTRO ENA

18 ENADOLUB

ENA 282.

$$y = f_0 e^{kt}$$
$$\frac{y}{f_0} = e^{kt}$$

$$\therefore \frac{y}{f_0} = e^{kt} = 3 \quad \text{at } t=9.$$

$$\frac{y}{f_0} = e^{kt} = 9 \quad \text{at } t=18.$$

$$\therefore f_0 = 50 \quad \text{--- i}$$

$$f_0 = 150 \quad \text{--- ii}$$

$$\therefore y = 50 e^{kt} \quad \text{--- iii}$$

$$y = 150 e^{kt} \quad \text{--- iv}$$

$$\therefore 3 = e$$

$$\ln 3 = \ln e^{kt}$$

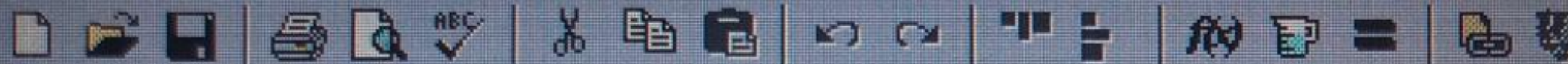
$$\ln 3 = kt$$

$$k = \frac{\ln 3}{9}$$

$$k = 0.122$$

$$\therefore y = 50 e^{0.122t} \quad \text{--- v}$$

$$y = 150 e^{0.122t} \quad \text{--- vi}$$



Normal

Arial

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$$Y_1(t) := 50e^{0.122t}$$

$$Y_2(t) := 150e^{0.122t}$$

