

بارها جانتی / یاد کنم پسره

① $m(\frac{v}{\Delta})^{\frac{t}{v}} = \frac{1}{v} m \Rightarrow (\frac{\Delta}{v})^{\frac{t}{v}} = v \Rightarrow (\frac{t}{v}) \log \frac{\Delta}{v} = \log v$

$\Rightarrow \frac{t}{v} = \frac{\log v}{\log \frac{\Delta}{v}} = \frac{\log v}{\log \frac{\Delta}{v}} = \frac{\log v}{r \log r - \log v} \xrightarrow{\log v = \frac{1}{0.15}} \frac{\frac{1}{0.15}}{\frac{r}{1.5} - \frac{1}{0.15}} = \frac{\frac{1}{0.15}}{\frac{1.8 - 1.2}{(1.2)(0.15)}} = \frac{1.6}{0.12} = 13.33 \approx 13$ ✓ (2)

$\Rightarrow \frac{t}{v} = 1 \Rightarrow t = 13 \text{ روز}$ ✓✓

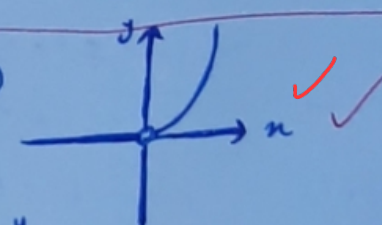
② در هر مرحله غلظت محلول $\frac{r^t}{100}$ می شود.

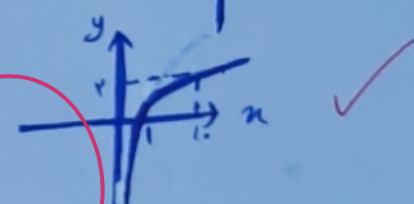
$\frac{1.06}{100} \times (\frac{r^t}{100})^t = \frac{1}{100} \times \frac{1.06}{100} \Rightarrow (\frac{r^t}{100})^t = \frac{1}{100}$

$\Rightarrow (t) \log \frac{r^t}{100} = \log \frac{1}{100} \Rightarrow (t) (\log r^t - 2) = -\log r^2 \Rightarrow (t) (t \log r + \log r^2 - 2) = -\log r^2$

$\xrightarrow{\log^2 = 1 - \log^2 \text{ or } v}$
 $\xrightarrow{\log^2 = 0.161}$
 $\xrightarrow{\log^2 = 0.13}$

$(t) (\frac{1}{1.5} + 0.161 - 2) = - (0.161) \Rightarrow t = 22 \text{ روز}$ ✓✓

⑤ الف) $y = 9 \log_3 n = n \log_3 n = n^r \xrightarrow{D_y = (0, +\infty)}$  ✓✓

ب) $y = \log_3 n^r = r \log_3 n \xrightarrow{D_y = \mathbb{R} - \{0\}}$  ✓✓

به دقت نگاه کن!