Name

Exponential Function Solution Equation - Decay (Discrete, Mis-matched Time Units) Equation to Starting Value

1 Rearrange this equation to solve for the starting concentration given this model of a decline of a toxin concentration (hourly dialysis)?

$$258 = C_0 \cdot (1 - 0.09)^{(7 \cdot 24)}$$

A $C_0 = \frac{258}{(1 + 0.09)^{7 \cdot 24}}$

B $C_0 = \frac{258}{(1 - 0.09)^{7 \cdot 24}}$

2 Rearrange this equation to solve for the starting concentration given this model of a decline of a toxin concentration (daily dialysis)?

$$124 = C_0 \cdot (1 - 0.09)^{(5 \cdot 7)}$$

A $C_0 = \frac{124}{(1 + 0.09)^{5 \cdot 7}}$

B $C_0 = 124 \cdot (1 - 0.09)^{\frac{5}{7}}$

C $C_0 = \frac{124}{(1 - 0.09)^{5 \cdot 7}}$

3 Rearrange this equation to solve for the starting concentration given this model of a decline of a toxin concentration (daily dialysis)?

$$0 = C_0 \cdot (1 - 0.09)^{\left(\frac{192}{24}\right)}$$

A $C_0 = \frac{0}{(1 - 0.09)^{\frac{192}{24}}}$

B $C_0 = \frac{0}{(1 + 0.09)^{\frac{192}{24}}}$

C $C_0 = 0 \cdot (1 - 0.09)^{192 \cdot 24}$

4 Rearrange this equation to solve for the starting cash given this model of a balance of a charitable endowment (daily disbursements)?

$$795 = P_0 \cdot (1 - 0.06)^{(2 \cdot 365)}$$

A $P_0 = \frac{795}{(1 + 0.06)^{2 \cdot 365}}$

B $P_0 = 795 \cdot (1 - 0.06)^{\frac{2}{365}}$

C $P_0 = \frac{795}{(1 - 0.06)^{2 \cdot 365}}$

5 Rearrange this equation to solve for the starting concentration given this model of a decline of a toxin concentration (daily dialysis)?

$$441 = C_0 \cdot (1 - 0.05)^{(9 \cdot 7)}$$

A $C_0 = 441 \cdot (1 - 0.05)^{\frac{9}{7}}$

B $C_0 = \frac{441}{(1 - 0.05)^{9 \cdot 7}}$

C $C_0 = \frac{441}{(1 + 0.05)^{9 \cdot 7}}$

6 Rearrange this equation to solve for the starting concentration given this model of a decline of a toxin concentration (weekly dialysis)?

$$29 = C_0 \cdot (1 - 0.09)^{\left(\frac{35}{7}\right)}$$

A $C_0 = \frac{29}{(1 - 0.09)^{\frac{35}{7}}}$

B $C_0 = 29 \cdot (1 - 0.09)^{35 \cdot 7}$

C $C_0 = \frac{29}{(1 + 0.09)^{\frac{35}{7}}}$

7 Rearrange this equation to solve for the starting concentration given this model of a decline of a toxin concentration (hourly dialysis)?

$$131 = C_0 \cdot (1 - 0.08)^{(5 \cdot 24)}$$

A $C_0 = \frac{131}{(1 + 0.08)^{5 \cdot 24}}$

B $C_0 = \frac{131}{(1 - 0.08)^{5 \cdot 24}}$

8 Rearrange this equation to solve for the starting cash given this model of a balance of a charitable endowment (yearly disbursements)?

$$14 = P_0 \cdot (1 - 0.03)^{\left(\frac{108}{12}\right)}$$

A $P_0 = \frac{14}{(1 - 0.03)^{\frac{108}{12}}}$

B $P_0 = 14 \cdot (1 - 0.03)^{108 \cdot 12}$

C $P_0 = \frac{14}{(1 + 0.03)^{\frac{108}{12}}}$