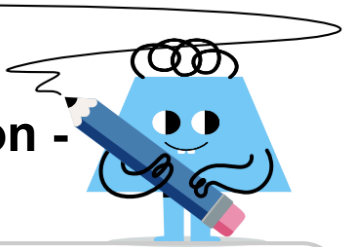
Name

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



1

A charitable endowment starts with a certain amount of money. Each daily it disburses 3% of its remaining funds. After 6 weeks its funds have decreased to $749.

Rearrange the exponential equation to solve for for the starting cash given this scenario?

A $P_0 = \frac{749}{(1-0.03)^{6 \cdot 7}}$

B $P_0 = \frac{749}{(1+0.03)^{6 \cdot 7}}$

C $P_0 = 749 \cdot (1-0.03)^{\frac{6}{7}}$

2

A charitable endowment starts with a certain amount of money. Each yearly it disburses 2% of its remaining funds. After 72 months its funds have decreased to $210.

Rearrange the exponential equation to solve for for the starting cash given this scenario?

A $P_0 = \frac{210}{(1-0.02)^{\frac{72}{12}}}$

B $P_0 = \frac{210}{(1+0.02)^{\frac{72}{12}}}$

3

A toxin starts at a certain concentration. Each daily dialysis reduces it by 5%. After 2 weeks it has decreased to a concentration of 631mg/L.

Rearrange the exponential equation to solve for for the starting concentration given this scenario?

A $C_0 = \frac{631}{(1+0.05)^{2 \cdot 7}}$

B $C_0 = 631 \cdot (1-0.05)^{\frac{2}{7}}$

C $C_0 = \frac{631}{(1-0.05)^{2 \cdot 7}}$

4

A charitable endowment starts with a certain amount of money. Each yearly it disburses 2% of its remaining funds. After 3285 days its funds have decreased to $0.

Rearrange the exponential equation to solve for for the starting cash given this scenario?

A $P_0 = \frac{0}{(1+0.02)^{\frac{3285}{365}}}$

B $P_0 = 0 \cdot (1-0.02)^{3285 \cdot 365}$

C $P_0 = \frac{0}{(1-0.02)^{\frac{3285}{365}}}$

5

A charitable endowment starts with a certain amount of money. Each daily it disburses 3% of its remaining funds. After 5 weeks its funds have decreased to $686.

Rearrange the exponential equation to solve for for the starting cash given this scenario?

A $P_0 = \frac{686}{(1+0.03)^{5 \cdot 7}}$

B $P_0 = 686 \cdot (1-0.03)^{\frac{5}{7}}$

C $P_0 = \frac{686}{(1-0.03)^{5 \cdot 7}}$

6

A charitable endowment starts with a certain amount of money. Each yearly it disburses 4% of its remaining funds. After 2190 days its funds have decreased to $0.

Rearrange the exponential equation to solve for for the starting cash given this scenario?

A $P_0 = 0 \cdot (1-0.04)^{2190 \cdot 365}$

B $P_0 = \frac{0}{(1-0.04)^{\frac{2190}{365}}}$

7

A toxin starts at a certain concentration. Each daily dialysis reduces it by 9%. After 8 weeks it has decreased to a concentration of 188mg/L.

Rearrange the exponential equation to solve for for the starting concentration given this scenario?

A $C_0 = \frac{188}{(1-0.09)^{8 \cdot 7}}$

B $C_0 = \frac{188}{(1+0.09)^{8 \cdot 7}}$

8

A charitable endowment starts with a certain amount of money. Each daily it disburses 6% of its remaining funds. After 2 weeks its funds have decreased to $265.

Rearrange the exponential equation to solve for for the starting cash given this scenario?

A $P_0 = \frac{265}{(1+0.06)^{2 \cdot 7}}$

B $P_0 = \frac{265}{(1-0.06)^{2 \cdot 7}}$

C $P_0 = 265 \cdot (1-0.06)^{\frac{2}{7}}$