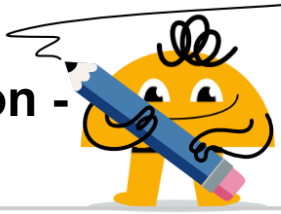
Name

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



1

A charitable endowment starts with $600. Each monthly it disburses a certain percent of its remaining funds. After 9 years its funds have decreased to $283.

Rearrange the exponential equation to solve for for the rate given this scenario?

A $r = +(\frac{283}{600})^{\frac{1}{9 \cdot 12}} + 1$

B $r = -(\frac{283}{600})^{\frac{9 \cdot 12}{2}} - 1$

C $r = -(\frac{283}{600})^{\frac{1}{9 \cdot 12}} - 1$

2

A toxin starts at a concentration of 300mg/L. Each daily dialysis reduces it by a certain percent. After 4 weeks it has decreased to a concentration of 224mg/L.

Rearrange the exponential equation to solve for for the rate given this scenario?

A $r = +(\frac{224}{300})^{\frac{1}{4 \cdot 7}} + 1$

B $r = -(\frac{224}{300})^{\frac{4 \cdot 7}{2}} - 1$

C $r = -(\frac{224}{300})^{\frac{1}{4 \cdot 7}} - 1$

3

A toxin starts at a concentration of 200mg/L. Each hourly dialysis reduces it by a certain percent. After 4 days it has decreased to a concentration of 143mg/L.

Rearrange the exponential equation to solve for for the rate given this scenario?

A $r = -(\frac{143}{200})^{\frac{4 \cdot 24}{2}} - 1$

B $r = -(\frac{143}{200})^{\frac{1}{4 \cdot 24}} - 1$

4

A charitable endowment starts with $200. Each weekly it disburses a certain percent of its remaining funds. After 28 days its funds have decreased to $19.

Rearrange the exponential equation to solve for for the rate given this scenario?

A $r = -(\frac{19}{200})^{\frac{\frac{1}{28}}{7}} - 1$

B $r = +(\frac{19}{200})^{\frac{1}{28 \cdot 7}} + 1$

C $r = -(\frac{19}{200})^{\frac{\frac{28}{7}}{2}} - 1$

5

A toxin starts at a concentration of 700mg/L. Each daily dialysis reduces it by a certain percent. After 5 weeks it has decreased to a concentration of 436mg/L.

Rearrange the exponential equation to solve for for the rate given this scenario?

A $r = -(\frac{436}{700})^{\frac{5 \cdot 7}{2}} - 1$

B $r = -(\frac{436}{700})^{\frac{1}{5 \cdot 7}} - 1$

C $r = +(\frac{436}{700})^{\frac{1}{\frac{5}{7}}} + 1$

6

A charitable endowment starts with $300. Each monthly it disburses a certain percent of its remaining funds. After 9 years its funds have decreased to $189.

Rearrange the exponential equation to solve for for the rate given this scenario?

A $r = -(\frac{189}{300})^{\frac{9 \cdot 12}{2}} - 1$

B $r = -(\frac{189}{300})^{\frac{1}{9 \cdot 12}} - 1$

C $r = +(\frac{189}{300})^{\frac{1}{\frac{9}{12}}} + 1$

7

A charitable endowment starts with $800. Each daily it disburses a certain percent of its remaining funds. After 3 weeks its funds have decreased to $752.

Rearrange the exponential equation to solve for for the rate given this scenario?

A $r = -(\frac{752}{800})^{\frac{3 \cdot 7}{2}} - 1$

B $r = -(\frac{752}{800})^{\frac{1}{3 \cdot 7}} - 1$

8

A toxin starts at a concentration of 800mg/L. Each daily dialysis reduces it by a certain percent. After 4 weeks it has decreased to a concentration of 737mg/L.

Rearrange the exponential equation to solve for for the rate given this scenario?

A $r = -(\frac{737}{800})^{\frac{1}{4 \cdot 7}} - 1$

B $r = +(\frac{737}{800})^{\frac{1}{\frac{4}{7}}} + 1$

C $r = -(\frac{737}{800})^{\frac{4 \cdot 7}{2}} - 1$