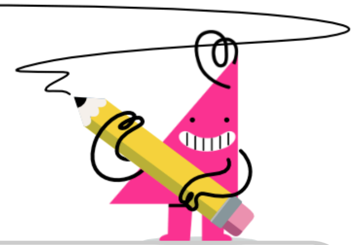
Name



Exponential Function Solving - Decay (Discrete) - Equation to Time

1 Solve for the time given this model of a decline of a bird population (yearly breeding cycle)?

$$583 = 700 \cdot (1 - 0.02)^{(t)}$$

A $t = \dfrac{\ln \frac{P}{P_0}}{\ln(1-r)}$

B $t = \dfrac{\ln P \cdot P_0}{\ln(1-r)}$

C $t = \dfrac{\ln \frac{P}{P_0}}{\ln(1+r)}$

2 Solve for the time given this model of a decline of a toxin concentration (daily dialysis)?

$$694 = 800 \cdot (1 - 0.02)^{(t)}$$

A $t = \dfrac{\ln \frac{C}{C_0}}{\ln(1-r)}$

B $t = \dfrac{\ln C \cdot C_0}{\ln(1-r)}$

3 Solve for the time given this model of a balance of a charitable endowment (monthly disbursements)?

$$207 = 300 \cdot (1 - 0.04)^{(t)}$$

A $t = \dfrac{\ln P \cdot P_0}{\ln(1-r)}$

B $t = \dfrac{\ln \frac{P}{P_0}}{\ln(1-r)}$

4 Solve for the time given this model of a decline of a bird population (yearly breeding cycle)?

$$170 = 300 \cdot (1 - 0.09)^{(t)}$$

A $t = \dfrac{\ln P \cdot P_0}{\ln(1-r)}$

B $t = \dfrac{\ln \frac{P}{P_0}}{\ln(1+r)}$

C $t = \dfrac{\ln \frac{P}{P_0}}{\ln(1-r)}$

5 Solve for the time given this model of a decline of a bird population (yearly breeding cycle)?

$$583 = 700 \cdot (1 - 0.03)^{(t)}$$

A $t = \dfrac{\ln \frac{P}{P_0}}{\ln(1+r)}$

B $t = \dfrac{\ln \frac{P}{P_0}}{\ln(1-r)}$

C $t = \dfrac{\ln P \cdot P_0}{\ln(1-r)}$

6 Solve for the time given this model of a decline of a toxin concentration (monthly dialysis)?

$$166 = 200 \cdot (1 - 0.06)^{(t)}$$

A $t = \dfrac{\ln \frac{C}{C_0}}{\ln(1+r)}$

B $t = \dfrac{\ln \frac{C}{C_0}}{\ln(1-r)}$

7 Solve for the time given this model of a decline of a toxin concentration (monthly dialysis)?

$$149 = 200 \cdot (1 - 0.07)^{(t)}$$

A $t = \dfrac{\ln C \cdot C_0}{\ln(1-r)}$

B $t = \dfrac{\ln \frac{C}{C_0}}{\ln(1+r)}$

C $t = \dfrac{\ln \frac{C}{C_0}}{\ln(1-r)}$

8 Solve for the time given this model of a balance of a charitable endowment (weekly disbursements)?

$$460 = 500 \cdot (1 - 0.04)^{(t)}$$

A $t = \dfrac{\ln \frac{P}{P_0}}{\ln(1-r)}$

B $t = \dfrac{\ln \frac{P}{P_0}}{\ln(1+r)}$

C $t = \dfrac{\ln P \cdot P_0}{\ln(1-r)}$