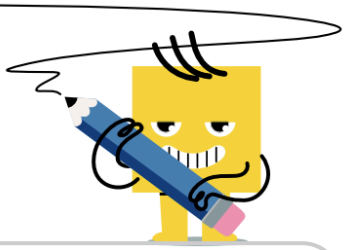
Name

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)?

$$752 = 800 \cdot (1 - 0.02)^{(t)}$$

A	$5 + t = \frac{\ln \frac{P}{P_0}}{\ln(1+r)}$	B	$t = \frac{\ln \frac{P}{P_0}}{\ln(1-r)}$
C	$2 + t = \frac{\ln P \cdot P_0}{\ln(1-r)}$		

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

$$456 = 600 \cdot (1 - 0.03)^{(t)}$$

A	$t = \frac{\ln \frac{P}{P_0}}{\ln(1-r)}$	B	$5 + t = \frac{\ln \frac{P}{P_0}}{\ln(1+r)}$
C	$5 + t = \frac{\ln P \cdot P_0}{\ln(1-r)}$	D	$2 + t = \frac{\ln P \cdot P_0}{\ln(1-r)}$

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

$$673 = 900 \cdot (1 - 0.07)^{(t)}$$

A	$1 + t = \frac{\ln P \cdot P_0}{\ln(1-r)}$	B	$0 + t = \frac{\ln P \cdot P_0}{\ln(1-r)}$
C	$3 + t = \frac{\ln P \cdot P_0}{\ln(1-r)}$	D	$t = \frac{\ln \frac{P}{P_0}}{\ln(1-r)}$

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

$$652 = 800 \cdot (1 - 0.04)^{(t)}$$

A	$4 + t = \frac{\ln \frac{P}{P_0}}{\ln(1+r)}$	B	$6 + t = \frac{\ln \frac{P}{P_0}}{\ln(1+r)}$
C	$t = \frac{\ln \frac{P}{P_0}}{\ln(1-r)}$	D	$6 + t = \frac{\ln P \cdot P_0}{\ln(1-r)}$

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

$$552 = 600 \cdot (1 - 0.04)^{(t)}$$

A	$6 + t = \frac{\ln P \cdot P_0}{\ln(1-r)}$	B	$8 + t = \frac{\ln \frac{P}{P_0}}{\ln(1+r)}$
C	$t = \frac{\ln \frac{P}{P_0}}{\ln(1-r)}$	D	$4 + t = \frac{\ln \frac{P}{P_0}}{\ln(1+r)}$

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

$$515 = 600 \cdot (1 - 0.03)^{(t)}$$

A	$1 + t = \frac{\ln C \cdot C_0}{\ln(1-r)}$	B	$2 + t = \frac{\ln \frac{C}{C_0}}{\ln(1+r)}$
C	$5 + t = \frac{\ln \frac{C}{C_0}}{\ln(1+r)}$	D	$t = \frac{\ln \frac{C}{C_0}}{\ln(1-r)}$

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

$$163 = 200 \cdot (1 - 0.04)^{(t)}$$

A	$7 + t = \frac{\ln \frac{C}{C_0}}{\ln(1+r)}$	B	$9 + t = \frac{\ln C \cdot C_0}{\ln(1-r)}$
C	$t = \frac{\ln \frac{C}{C_0}}{\ln(1-r)}$	D	$8 + t = \frac{\ln C \cdot C_0}{\ln(1-r)}$

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

$$579 = 700 \cdot (1 - 0.09)^{(t)}$$

A	$t = \frac{\ln \frac{P}{P_0}}{\ln(1-r)}$	B	$9 + t = \frac{\ln \frac{P}{P_0}}{\ln(1+r)}$
C	$7 + t = \frac{\ln P \cdot P_0}{\ln(1-r)}$	D	$4 + t = \frac{\ln \frac{P}{P_0}}{\ln(1+r)}$