Name

Exponential Function Solving - Decay (Discrete) Equation to Rate

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

$$323 = 500 \cdot (1 - r)^{(6)}$$

A	$r = -(\frac{C}{C_0})^{\frac{1}{7}} - 1$	B	$9 + r = -(\frac{C}{C_0})^{\frac{t}{2}} - 1$
C	$6 + r = -(\frac{C}{C_0})^{\frac{t}{2}} - 1$	D	$7 + r = -(\frac{C}{C_0})^{\frac{1}{7}} + 1$

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

$$331 = 400 \cdot (1 - r)^{(2)}$$

A	$r = -(\frac{P}{P_0})^{\frac{1}{7}} - 1$	B	$5 + r = -(\frac{P}{P_0})^{\frac{1}{7}} + 1$
C	$4 + r = -(\frac{P}{P_0})^{\frac{1}{7}} + 1$	D	$9 + r = -(\frac{P}{P_0})^{\frac{1}{7}} + 1$

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

$$518 = 800 \cdot (1 - r)^{(7)}$$

A	$0 + r = -(\frac{P}{P_0})^{\frac{t}{2}} - 1$	B	$r = -(\frac{P}{P_0})^{\frac{1}{7}} - 1$
C	$6 + r = -(\frac{P}{P_0})^{\frac{1}{7}} + 1$	D	$5 + r = -(\frac{P}{P_0})^{\frac{1}{7}} + 1$

4 Solve for the rate given this model of a decline of a toxin concentration (weekly dialysis)?

$$376 = 500 \cdot (1 - r)^{(3)}$$

A	$1 + r = -(\frac{C}{C_0})^{\frac{t}{2}} - 1$	B	$2 + r = -(\frac{C}{C_0})^{\frac{t}{2}} - 1$
C	$6 + r = -(\frac{C}{C_0})^{\frac{t}{2}} - 1$	D	$r = -(\frac{C}{C_0})^{\frac{1}{7}} - 1$

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

$$293 = 400 \cdot (1 - r)^{(5)}$$

A	$7 + r = -(\frac{P}{P_0})^{\frac{t}{2}} - 1$	B	$r = -(\frac{P}{P_0})^{\frac{1}{7}} - 1$
C	$1 + r = -(\frac{P}{P_0})^{\frac{t}{2}} - 1$	D	$3 + r = -(\frac{P}{P_0})^{\frac{1}{7}} + 1$

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

$$255 = 300 \cdot (1 - r)^{(8)}$$

A	$3 + r = -(\frac{C}{C_0})^{\frac{1}{7}} + 1$	B	$r = -(\frac{C}{C_0})^{\frac{1}{7}} - 1$
C	$2 + r = -(\frac{C}{C_0})^{\frac{1}{7}} + 1$		

7 Solve for the rate given this model of a balance of a charitable endowment (yearly disbursements)?

$$424 = 700 \cdot (1 - r)^{(6)}$$

A	$2 + r = -(\frac{P}{P_0})^{\frac{t}{2}} - 1$	B	$8 + r = -(\frac{P}{P_0})^{\frac{1}{7}} + 1$
C	$r = -(\frac{P}{P_0})^{\frac{1}{7}} - 1$	D	$6 + r = -(\frac{P}{P_0})^{\frac{1}{7}} + 1$

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

$$398 = 600 \cdot (1 - r)^{(8)}$$

A	$8 + r = -(\frac{P}{P_0})^{\frac{1}{7}} + 1$	B	$2 + r = -(\frac{P}{P_0})^{\frac{1}{7}} + 1$
C	$6 + r = -(\frac{P}{P_0})^{\frac{1}{7}} + 1$	D	$r = -(\frac{P}{P_0})^{\frac{1}{7}} - 1$