Name

Exponential Function Solving - Decay (Discrete) Equation to Starting Value

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

$$234 = P_0 \cdot (1 - 0.06)^{(4)}$$

A	$3 + P_0 = P \cdot (1 - r)^t$	B	$P_0 = \frac{P}{(1 - r)^t}$
C	$3 + P_0 = \frac{P}{(1 + r)^t}$	D	$8 + P_0 = P \cdot (1 - r)^t$

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

$$156 = P_0 \cdot (1 - 0.03)^{(8)}$$

A	$3 + P_0 = \frac{P}{(1 + r)^t}$	B	$P_0 = \frac{P}{(1 - r)^t}$
C	$1 + P_0 = P \cdot (1 - r)^t$	D	$9 + P_0 = P \cdot (1 - r)^t$

3 Solve for the starting cash given this model of a balance of a charitable endowment (yearly disbursements)?

$$141 = P_0 \cdot (1 - 0.09)^{(8)}$$

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

4 Solve for the starting cash given this model of a balance of a charitable endowment (yearly disbursements)?

$$150 = P_0 \cdot (1 - 0.04)^{(7)}$$

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

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

$$553 = C_0 \cdot (1 - 0.02)^{(4)}$$

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

6 Solve for the starting cash given this model of a balance of a charitable endowment (yearly disbursements)?

$$707 = P_0 \cdot (1 - 0.04)^{(3)}$$

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

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

$$121 = P_0 \cdot (1 - 0.08)^{(6)}$$

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

8 Solve for the starting cash given this model of a balance of a charitable endowment (daily disbursements)?

$$293 = P_0 \cdot (1 - 0.06)^{(5)}$$

A	$9 + P_0 = \frac{P}{(1 + r)^t}$	B	$3 + P_0 = P \cdot (1 - r)^t$
C	$P_0 = \frac{P}{(1 - r)^t}$	D	$8 + P_0 = \frac{P}{(1 + r)^t}$