Name

Exponential Function Solving - Growth (Discrete) Equation to Value at Time

1 Solve for the final population given this model of a growth of an insect population that breeds once per year?

$$P = 500 \cdot (1 + 0.09)^{(6)}$$

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

2 Solve for the final debt given this model of a growth in credit card debt with yearly interest?

$$D = 700 \cdot (1 + 0.04)^{(8)}$$

A	$D = D_0 \cdot (1 + r)^{(t)}$	B	$5 + D = \frac{D_0}{(1 + r)^{(t)}}$
C	$2 + D = D_0 \cdot (1 - r)^{(t)}$	D	$9 + D = \frac{D_0}{(1 + r)^{(t)}}$

3 Solve for the final population given this model of a growth of a rabbit population (yearly breeding cycle)?

$$P = 900 \cdot (1 + 0.03)^{(7)}$$

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

4 Solve for the final cash given this model of a monthly compounding growth of money in a savings account?

$$P = 700 \cdot (1 + 0.02)^{(8)}$$

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

5 Solve for the final cash given this model of a quarterly compounding growth of money in a savings account?

$$P = 600 \cdot (1 + 0.08)^{(4)}$$

A	$9 + P = P_0 \cdot (1 - r)^{(t)}$	B	$2 + P = P_0 \cdot (1 - r)^{(t)}$
C	$P = P_0 \cdot (1 + r)^{(t)}$	D	$1 + P = P_0 \cdot (1 - r)^{(t)}$

6 Solve for the final population given this model of a growth of an insect population that breeds once per year?

$$P = 900 \cdot (1 + 0.03)^{(2)}$$

A	$5 + P = P_0 \cdot (1 - r)^{(t)}$	B	$4 + P = P_0 \cdot (1 - r)^{(t)}$
C	$P = P_0 \cdot (1 + r)^{(t)}$	D	$8 + P = P_0 \cdot (1 - r)^{(t)}$

7 Solve for the final population given this model of a growth of a rabbit population (yearly breeding cycle)?

$$P = 900 \cdot (1 + 0.08)^{(7)}$$

A	$7 + P = P_0 \cdot (1 - r)^{(t)}$	B	$P = P_0 \cdot (1 + r)^{(t)}$
C	$3 + P = \frac{P_0}{(1 + r)^{(t)}}$	D	$5 + P = P_0 \cdot (1 - r)^{(t)}$

8 Solve for the final debt given this model of a growth in credit card debt with yearly interest?

$$D = 200 \cdot (1 + 0.06)^{(8)}$$

A	$0 + D = D_0 \cdot (1 - r)^{(t)}$	B	$4 + D = \frac{D_0}{(1 + r)^{(t)}}$
C	$2 + D = D_0 \cdot (1 - r)^{(t)}$	D	$D = D_0 \cdot (1 + r)^{(t)}$