Name

Exponential Function Solving - Growth (Discrete, Mis-matched Time Units) Equation to Starting Value

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

$$648 = P_0 \cdot (1 + 0.04)^{(2 \cdot 3)}$$

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

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

$$12,864 = D_0 \cdot (1 + 0.07)^{(\frac{48}{12})}$$

A	$D_0 = D \cdot (1+r)^{t \cdot 12}$	B	$D_0 = \frac{D}{(1-r)^{\frac{t}{12}}}$
C	$D_0 = \frac{D}{(1+r)^{\frac{t}{12}}}$		

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

$$771 = P_0 \cdot (1 + 0.05)^{(2 \cdot 3)}$$

A $P_0 = \frac{P}{(1+r)^{t \cdot 3}}$

B $P_0 = P \cdot (1+r)^{\frac{t}{3}}$

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

$$225 = P_0 \cdot (1 + 0.03)^{(4 \cdot 3)}$$

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

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

$$750 = P_0 \cdot (1 + 0.07)^{(6 \cdot 4)}$$

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

6 Solve for the starting cash given this model of a yearly compounding growth of money in a savings account?

$$3,193 = P_0 \cdot (1 + 0.08)^{(\frac{36}{12})}$$

A	$P_0 = P \cdot (1+r)^{t \cdot 12}$	B	$P_0 = \frac{P}{(1-r)^{\frac{t}{12}}}$
C	$P_0 = \frac{P}{(1+r)^{\frac{t}{12}}}$		

7 Solve for the starting debt given this model of a growth in credit card debt with monthly interest?

$$930 = D_0 \cdot (1 + 0.05)^{(9 \cdot 3)}$$

A	$D_0 = \frac{D}{(1-r)^{t \cdot 3}}$	B	$D_0 = D \cdot (1+r)^{\frac{t}{3}}$
C	$D_0 = \frac{D}{(1+r)^{t \cdot 3}}$		

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

$$973 = P_0 \cdot (1 + 0.04)^{(5 \cdot 4)}$$

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