mobius

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

1 Solve for the rate given this model of a yearly compounding growth of money in a savings account?

$$3,170 = 500 \cdot (1+r)^{\left(\frac{24}{12}\right)}$$

A	$r = +(\frac{P}{P_0})^{\frac{1}{t \cdot 12}} + 1$	B	$r = +(\frac{P}{P_0})^{\frac{1}{12}} - 1$
C	$r = +(\frac{P}{P_0})^{\frac{t}{2}} - 1$		

2 Solve for the rate given this model of a yearly compounding growth of money in a savings account?

$$1,394 = 700 \cdot (1+r)^{\left(\frac{8}{4}\right)}$$

A	$r = +(\frac{P}{P_0})^{\frac{t}{2}} - 1$	B	$r = +(\frac{P}{P_0})^{\frac{1}{t}} - 1$
C	$r = +(\frac{P}{P_0})^{\frac{1}{t \cdot 4}} + 1$		

3 Solve for the rate given this model of a quarterly compounding growth of money in a savings account?

$$675 = 200 \cdot (1+r)^{\left(\frac{18}{3}\right)}$$

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

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

$$3,136 = 800 \cdot (1+r)^{\left(\frac{28}{4}\right)}$$

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

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

$$465 = 300 \cdot (1+r)^{(9 \cdot 3)}$$

A	$r = +(\frac{D}{D_0})^{\frac{1}{t \cdot 3}} - 1$	B	$r = +(\frac{D}{D_0})^{\frac{1}{3}} + 1$
C	$r = +(\frac{D}{D_0})^{\frac{t \cdot 3}{2}} - 1$		

6 Solve for the rate given this model of a monthly compounding growth of money in a savings account?

$$468 = 400 \cdot (1+r)^{(8 \cdot 12)}$$

A	$r = +(\frac{P}{P_0})^{\frac{1}{12}} + 1$	B	$r = +(\frac{P}{P_0})^{\frac{t \cdot 12}{2}} - 1$
C	$r = +(\frac{P}{P_0})^{\frac{1}{t \cdot 12}} - 1$		

7 Solve for the rate given this model of a yearly compounding growth of money in a savings account?

$$967 = 300 \cdot (1+r)^{\left(\frac{24}{12}\right)}$$

A	$r = +(\frac{P}{P_0})^{\frac{t}{2}} - 1$	B	$r = +(\frac{P}{P_0})^{\frac{1}{12}} - 1$
C	$r = +(\frac{P}{P_0})^{\frac{1}{t \cdot 12}} + 1$		

8 Solve for the rate given this model of a yearly compounding growth of money in a savings account?

$$478 = 300 \cdot (1+r)^{\left(\frac{8}{4}\right)}$$

A	$r = +(\frac{P}{P_0})^{\frac{1}{t \cdot 4}} + 1$	B	$r = +(\frac{P}{P_0})^{\frac{1}{4}} - 1$
C	$r = +(\frac{P}{P_0})^{\frac{t}{2}} - 1$		