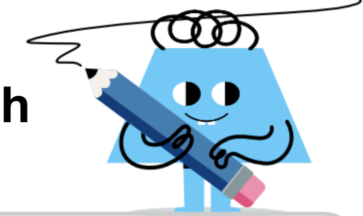
Name

mobius

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



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

$$514 = 300 \cdot (1+0.08)^{(t)}$$

A $t = \dfrac{\ln \frac{P}{P_0}}{\ln(1+r)}$

B $t = \dfrac{\ln P \cdot P_0}{\ln(1+r)}$

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

$$253 = 200 \cdot (1+0.04)^{(t)}$$

A $t = \dfrac{\ln \frac{P}{P_0}}{\ln(1+r)}$

B $t = \dfrac{\ln \frac{P}{P_0}}{\ln(1-r)}$

C $t = \dfrac{\ln P \cdot P_0}{\ln(1+r)}$

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

$$365 = 200 \cdot (1+0.09)^{(t)}$$

A $t = \dfrac{\ln \frac{P}{P_0}}{\ln(1-r)}$

B $t = \dfrac{\ln \frac{P}{P_0}}{\ln(1+r)}$

C $t = \dfrac{\ln P \cdot P_0}{\ln(1+r)}$

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

$$410 = 300 \cdot (1+0.04)^{(t)}$$

A $t = \dfrac{\ln \frac{P}{P_0}}{\ln(1+r)}$

B $t = \dfrac{\ln \frac{P}{P_0}}{\ln(1-r)}$

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

$$451 = 300 \cdot (1+0.06)^{(t)}$$

A $t = \dfrac{\ln \frac{D}{D_0}}{\ln(1-r)}$

B $t = \dfrac{\ln \frac{D}{D_0}}{\ln(1+r)}$

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

$$561 = 400 \cdot (1+0.07)^{(t)}$$

A $t = \dfrac{\ln P \cdot P_0}{\ln(1+r)}$

B $t = \dfrac{\ln \frac{P}{P_0}}{\ln(1-r)}$

C $t = \dfrac{\ln \frac{P}{P_0}}{\ln(1+r)}$

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

$$317 = 200 \cdot (1+0.08)^{(t)}$$

A $t = \dfrac{\ln \frac{P}{P_0}}{\ln(1-r)}$

B $t = \dfrac{\ln P \cdot P_0}{\ln(1+r)}$

C $t = \dfrac{\ln \frac{P}{P_0}}{\ln(1+r)}$

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

$$600 = 400 \cdot (1+0.07)^{(t)}$$

A $t = \dfrac{\ln \frac{P}{P_0}}{\ln(1-r)}$

B $t = \dfrac{\ln \frac{P}{P_0}}{\ln(1+r)}$

C $t = \dfrac{\ln P \cdot P_0}{\ln(1+r)}$