Name

1

A rabbit population starts at 200. Each subsequent yearly breeding season it grows by 4%. After a certain number of years it has increased to a population of 243 rabbits.

Solve for the time given this scenario?

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

B $\quad 8 + t = \dfrac{\ln P \cdot P_0}{\ln (1+r)}$

C $\quad 5 + t = \dfrac{\ln P \cdot P_0}{\ln (1+r)}$

2

A savings account starts with \$500. Each subsequent month it earns 9% in interest. After a certain number of months it has \$914.

Solve for the time given this scenario?

A $\quad 4 + t = \dfrac{\ln \frac{P}{P_0}}{\ln (1-r)}$

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

C $\quad 6 + t = \dfrac{\ln \frac{P}{P_0}}{\ln (1-r)}$

D $\quad 5 + t = \dfrac{\ln P \cdot P_0}{\ln (1+r)}$

3

An insect population starts at 900. Each subsequent yearly breeding season it grows by 7%. After a certain number of years it has increased to a population of 1,179.

Solve for the time given this scenario?

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

B $\quad 4 + t = \dfrac{\ln \frac{P}{P_0}}{\ln (1-r)}$

C $\quad 9 + t = \dfrac{\ln \frac{P}{P_0}}{\ln (1-r)}$

D $\quad 3 + t = \dfrac{\ln \frac{P}{P_0}}{\ln (1-r)}$

4

A savings account starts with \$600. Each subsequent year it earns 8% in interest. After a certain number of years it has \$1,028.

Solve for the time given this scenario?

A $\quad 4 + t = \dfrac{\ln \frac{P}{P_0}}{\ln (1-r)}$

B $\quad 3 + t = \dfrac{\ln \frac{P}{P_0}}{\ln (1-r)}$

C $\quad 5 + t = \dfrac{\ln \frac{P}{P_0}}{\ln (1-r)}$

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

5

A credit card starts with \$300 of debt. Each subsequent month it grows by 9% in interest. After a certain number of months the debt has grown to \$503.

Solve for the time given this scenario?

A $\quad 6 + t = \dfrac{\ln \frac{D}{D_0}}{\ln (1-r)}$

B $\quad 2 + t = \dfrac{\ln \frac{D}{D_0}}{\ln (1-r)}$

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

D $\quad 4 + t = \dfrac{\ln D \cdot D_0}{\ln (1+r)}$

6

A credit card starts with \$600 of debt. Each subsequent quarter it grows by 7% in interest. After a certain number of quarters the debt has grown to \$735.

Solve for the time given this scenario?

A $\quad 9 + t = \dfrac{\ln D \cdot D_0}{\ln (1+r)}$

B $\quad 6 + t = \dfrac{\ln \frac{D}{D_0}}{\ln (1-r)}$

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

D $\quad 6 + t = \dfrac{\ln D \cdot D_0}{\ln (1+r)}$

7

A credit card starts with \$700 of debt. Each subsequent month it grows by 9% in interest. After a certain number of months the debt has grown to \$906.

Solve for the time given this scenario?

A $\quad 9 + t = \dfrac{\ln \frac{D}{D_0}}{\ln (1-r)}$

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

C $\quad 9 + t = \dfrac{\ln D \cdot D_0}{\ln (1+r)}$

D $\quad 3 + t = \dfrac{\ln \frac{D}{D_0}}{\ln (1-r)}$

8

A savings account starts with \$500. Each subsequent quarter it earns 9% in interest. After a certain number of quarters it has \$838.

Solve for the time given this scenario?

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

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

C $\quad 2 + t = \dfrac{\ln P \cdot P_0}{\ln (1+r)}$

D $\quad 6 + t = \dfrac{\ln P \cdot P_0}{\ln (1+r)}$