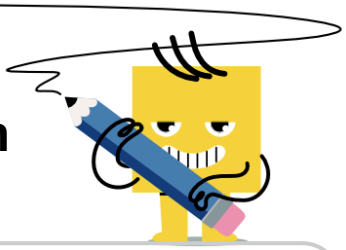
Name

Exponential Function Solving - Growth (Continuous) - Scenario to Time



1

An insect population starts at 800. It grows continuously at 3% growth per day. After a certain number of days it has increased to a population of 1,047.

How would you solve for the time given this scenario?

A $t = +\frac{r}{\ln \frac{P}{P_0}}$

B $t = +\frac{\ln P \cdot P_0}{r}$

C $t = +\frac{\ln \frac{P}{P_0}}{r}$

2

An insect population starts at 500. It grows continuously at 3% growth per year. After a certain number of years it has increased to a population of 635.

How would you solve for the time given this scenario?

A $t = +\frac{r}{\ln \frac{P}{P_0}}$

B $t = +\frac{\ln \frac{P}{P_0}}{r}$

3

A savings account starts with $600. It grows continuously at 3% interest per month. After a certain number of months it has $637.

How would you solve for the time given this scenario?

A $t = +\frac{r}{\ln \frac{P}{P_0}}$

B $t = +\frac{\ln P \cdot P_0}{r}$

C $t = +\frac{\ln \frac{P}{P_0}}{r}$

4

An insect population starts at 300. It grows continuously at 7% growth per day. After a certain number of days it has increased to a population of 345.

How would you solve for the time given this scenario?

A $t = +\frac{\ln P \cdot P_0}{r}$

B $t = +\frac{\ln \frac{P}{P_0}}{r}$

C $t = +\frac{r}{\ln \frac{P}{P_0}}$

5

A rabbit population starts at 800. It grows continuously at 7% growth per quarter. After a certain number of quarters it has increased to a population of 920 rabbits.

How would you solve for the time given this scenario?

A $t = +\frac{r}{\ln \frac{P}{P_0}}$

B $t = +\frac{\ln \frac{P}{P_0}}{r}$

6

An insect population starts at 500. It grows continuously at 3% growth per month. After a certain number of months it has increased to a population of 616.

How would you solve for the time given this scenario?

A $t = +\frac{r}{\ln \frac{P}{P_0}}$

B $t = +\frac{\ln \frac{P}{P_0}}{r}$

C $t = +\frac{\ln P \cdot P_0}{r}$

7

A credit card starts with $700 of debt. It grows continuously at 9% interest per month. After a certain number of months the debt has grown to $838.

How would you solve for the time given this scenario?

A $t = +\frac{\ln \frac{D}{D_0}}{r}$

B $t = +\frac{\ln D \cdot D_0}{r}$

C $t = +\frac{r}{\ln \frac{D}{D_0}}$

8

An insect population starts at 800. It grows continuously at 2% growth per month. After a certain number of months it has increased to a population of 901.

How would you solve for the time given this scenario?

A $t = +\frac{\ln \frac{P}{P_0}}{r}$

B $t = +\frac{r}{\ln \frac{P}{P_0}}$

C $t = +\frac{\ln P \cdot P_0}{r}$