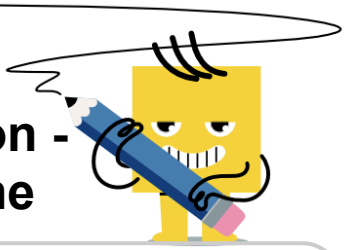
Name

Exponential Function Solution Equation - Growth (Continuous, Mis-matched Time Units) Scenario to Starting Value



1

A bacteria population starts at a certain size. It grows continuously at 3% growth per day. After 7 years it has increased to a population of 493.

Rearrange the exponential equation to solve for for the starting population given this scenario?

A $P_0 = \frac{493}{e^{(0.03 \cdot 7 \cdot 365)}}$

B $P_0 = \frac{e^{(0.03 \cdot 7 \cdot 365)}}{493}$

C $P_0 = \frac{493}{e^{(\frac{0.03}{7} \cdot 365)}}$

2

A rabbit population starts at a certain size. It grows continuously at 4% growth per year. After 6 quarters it has increased to a population of 635 rabbits.

Rearrange the exponential equation to solve for for the starting population given this scenario?

A $P_0 = \frac{635}{e^{(\frac{0.04}{6 \cdot 4} \cdot 6)}}$

B $P_0 = \frac{635}{e^{(0.04 \cdot \frac{6}{4})}}$

3

A social media post starts with a certain number of views. Its view count grows continually by 2% each day.After 6 years it has 563 views.

Rearrange the exponential equation to solve for for the starting views given this scenario?

A $V_0 = \frac{563}{e^{(0.02 \cdot 6 \cdot 365)}}$

B $V_0 = \frac{563}{e^{(\frac{0.02}{\frac{6}{365}})}}$

4

A company's share price starts at a certain value. It grows continuously at 9% growth per quarter. After 3 years it has a share price of $1,047.

Rearrange the exponential equation to solve for for the starting price given this scenario?

A $S_0 = \frac{1047}{e^{(0.09 \cdot 3 \cdot 4)}}$

B $S_0 = \frac{e^{(0.09 \cdot 3 \cdot 4)}}{1047}$

C $S_0 = \frac{1047}{e^{(\frac{0.09}{\frac{3}{4}})}}$

5

A company's share price starts at a certain value. It grows continuously at 9% growth per month. After 3 quarters it has a share price of $261.

Rearrange the exponential equation to solve for for the starting price given this scenario?

A $S_0 = \frac{e^{(0.09 \cdot 3 \cdot 3)}}{261}$

B $S_0 = \frac{261}{e^{(\frac{0.09}{\frac{3}{3}})}}$

C $S_0 = \frac{261}{e^{(0.09 \cdot 3 \cdot 3)}}$

6

A company's share price starts at a certain value. It grows continuously at 5% growth per month. After 6 quarters it has a share price of $269.

Rearrange the exponential equation to solve for for the starting price given this scenario?

A $S_0 = \frac{269}{e^{(0.05 \cdot 6 \cdot 3)}}$

B $S_0 = \frac{e^{(0.05 \cdot 6 \cdot 3)}}{269}$

7

A company's share price starts at a certain value. It grows continuously at 8% growth per quarter. After 3 years it has a share price of $889.

Rearrange the exponential equation to solve for for the starting price given this scenario?

A $S_0 = \frac{e^{(0.08 \cdot 3 \cdot 4)}}{889}$

B $S_0 = \frac{889}{e^{(0.08 \cdot 3 \cdot 4)}}$

8

An insect population starts at a certain size. It grows continuously at 5% growth per year. After 6 days it has increased to a population of 1,079.

Rearrange the exponential equation to solve for for the starting population given this scenario?

A $P_0 = \frac{e^{(0.05 \cdot \frac{6}{365})}}{1079}$

B $P_0 = \frac{1079}{e^{(0.05 \cdot \frac{6}{365})}}$

C $P_0 = \frac{1079}{e^{(\frac{0.05}{6 \cdot 365})}}$