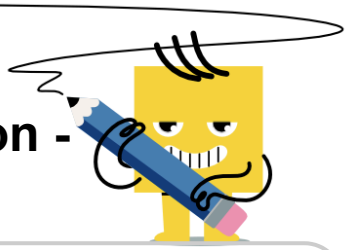
Name

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



1

A credit card starts with $200 of debt. Each subsequent year it grows by a certain percent interest. After 12 quarters the debt has grown to $359.

Rearrange the exponential equation to solve for for the rate given this scenario?

A $r = \left(\frac{359}{200}\right)^{\frac{1}{\frac{12}{4}}} - 1$

B $r = \left(\frac{359}{200}\right)^{\frac{\frac{12}{4}}{2}} - 1$

C $r = -\left(\frac{359}{200}\right)^{\frac{1}{12 \cdot 4}} + 1$

2

A savings account starts with $400. Each subsequent month it earns a certain percent interest. After 9 years it has $735.

Rearrange the exponential equation to solve for for the rate given this scenario?

A $r = \left(\frac{735}{400}\right)^{\frac{1}{9 \cdot 12}} - 1$

B $r = -\left(\frac{735}{400}\right)^{\frac{1}{\frac{9}{12}}} + 1$

C $r = \left(\frac{735}{400}\right)^{\frac{9 \cdot 12}{2}} - 1$

3

A savings account starts with $700. Each subsequent quarter it earns a certain percent interest. After 5 years it has $1,028.

Rearrange the exponential equation to solve for for the rate given this scenario?

A $r = -\left(\frac{1028}{700}\right)^{\frac{1}{\frac{5}{4}}} + 1$

B $r = \left(\frac{1028}{700}\right)^{\frac{5 \cdot 4}{2}} - 1$

C $r = \left(\frac{1028}{700}\right)^{\frac{1}{5 \cdot 4}} - 1$

4

A credit card starts with $800 of debt. Each subsequent month it grows by a certain percent interest. After 2 years the debt has grown to $950.

Rearrange the exponential equation to solve for for the rate given this scenario?

A $r = \left(\frac{950}{800}\right)^{\frac{1}{2 \cdot 12}} - 1$

B $r = -\left(\frac{950}{800}\right)^{\frac{1}{\frac{2}{12}}} + 1$

C $r = \left(\frac{950}{800}\right)^{\frac{2 \cdot 12}{2}} - 1$

5

A savings account starts with $400. Each subsequent quarter it earns a certain percent interest. After 15 months it has $1,456.

Rearrange the exponential equation to solve for for the rate given this scenario?

A $r = -\left(\frac{1456}{400}\right)^{\frac{1}{15 \cdot 3}} + 1$

B $r = \left(\frac{1456}{400}\right)^{\frac{15}{\frac{3}{2}}} - 1$

C $r = \left(\frac{1456}{400}\right)^{\frac{1}{\frac{15}{3}}} - 1$

6

A credit card starts with $500 of debt. Each subsequent year it grows by a certain percent interest. After 72 months the debt has grown to $65,253.

Rearrange the exponential equation to solve for for the rate given this scenario?

A $r = \left(\frac{65253}{500}\right)^{\frac{1}{\frac{72}{12}}} - 1$

B $r = \left(\frac{65253}{500}\right)^{\frac{\frac{72}{12}}{2}} - 1$

7

A credit card starts with $900 of debt. Each subsequent quarter it grows by a certain percent interest. After 12 months the debt has grown to $2,026.

Rearrange the exponential equation to solve for for the rate given this scenario?

A $r = -\left(\frac{2026}{900}\right)^{\frac{1}{12 \cdot 3}} + 1$

B $r = \left(\frac{2026}{900}\right)^{\frac{\frac{12}{3}}{2}} - 1$

C $r = \left(\frac{2026}{900}\right)^{\frac{1}{\frac{12}{3}}} - 1$

8

A credit card starts with $700 of debt. Each subsequent year it grows by a certain percent interest. After 108 months the debt has grown to $378,557.

Rearrange the exponential equation to solve for for the rate given this scenario?

A $r = \left(\frac{378557}{700}\right)^{\frac{\frac{108}{12}}{2}} - 1$

B $r = \left(\frac{378557}{700}\right)^{\frac{1}{\frac{108}{12}}} - 1$

C $r = -\left(\frac{378557}{700}\right)^{\frac{1}{108 \cdot 12}} + 1$