



## Exponential Function Solution Equation - Growth (Continuous) Scenario to Rate

1

A company's share price starts at \$500. It grows continuously at a certain percent growth per quarter. After 6 quarters it has a share price of \$808.

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

A	B
$r = + \frac{e^{\frac{808}{500}}}{6}$	$r = + \frac{\ln \frac{808}{500}}{6}$

2

A savings account starts with \$500. It grows continuously at a certain percent interest per month. After 2 months it has \$586.

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

A	B
$r = + \frac{\ln \frac{500}{586}}{2}$	$r = + \frac{e^{\frac{586}{500}}}{2}$
C	
$r = + \frac{\ln \frac{586}{500}}{2}$	

3

A credit card starts with \$300 of debt. It grows continuously at a certain percent interest per year. After 6 years the debt has grown to \$404.

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

A	B
$r = + \frac{\ln \frac{300}{404}}{6}$	$r = + \frac{\ln \frac{404}{300}}{6}$
C	
$r = + \frac{e^{\frac{404}{300}}}{6}$	

4

A company's share price starts at \$500. It grows continuously at a certain percent growth per month. After 9 months it has a share price of \$938.

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

A	B
$r = + \frac{\ln \frac{500}{938}}{9}$	$r = + \frac{\ln \frac{938}{500}}{9}$
C	
$r = + \frac{e^{\frac{938}{500}}}{9}$	

5

A credit card starts with \$200 of debt. It grows continuously at a certain percent interest per month. After 6 months the debt has grown to \$323.

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

A	B
$r = + \frac{\ln \frac{323}{200}}{6}$	$r = + \frac{e^{\frac{323}{200}}}{6}$
C	
$r = + \frac{\ln \frac{200}{323}}{6}$	

6

A company's share price starts at \$900. It grows continuously at a certain percent growth per quarter. After 2 quarters it has a share price of \$1,035.

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

A	B
$r = + \frac{\ln \frac{1035}{900}}{2}$	$r = + \frac{e^{\frac{1035}{900}}}{2}$
C	
$r = + \frac{\ln \frac{900}{1035}}{2}$	

7

A company's share price starts at \$200. It grows continuously at a certain percent growth per year. After 4 years it has a share price of \$225.

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

A	B
$r = + \frac{\ln \frac{225}{200}}{4}$	$r = + \frac{\ln \frac{200}{225}}{4}$
C	
$r = + \frac{e^{\frac{225}{200}}}{4}$	

8

A bacteria population starts at 200. It grows continuously at a certain percent growth per year. After 9 years it has increased to a population of 261.

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

A	B
$r = + \frac{e^{\frac{261}{200}}}{9}$	$r = + \frac{\ln \frac{200}{261}}{9}$
C	
$r = + \frac{\ln \frac{261}{200}}{9}$	