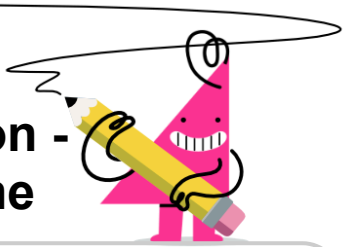
Name

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



1 Rearrange this equation to solve for the time given this model of a growth of debt on a credit card with continuous compounding?

$$298 = 200 \cdot e^{(0.08 \cdot \frac{t}{12})}$$

A	$t = -\frac{1}{12} \cdot \frac{\ln 298 \cdot 200}{0.08}$	B	$t = 12 \cdot \frac{0.08}{\ln \frac{298}{200}}$
C	$t = 12 \cdot \frac{\ln \frac{298}{200}}{0.08}$		

2 Rearrange this equation to solve for the time given this model of a continuous growth of a bacteria population?

$$697 = 600 \cdot e^{(0.05 \cdot t \cdot 7)}$$

A	$t = -7 \cdot \frac{\ln 697 \cdot 600}{0.05}$	B	$t = \frac{1}{7} \cdot \frac{0.05}{\ln \frac{697}{600}}$
C	$t = \frac{1}{7} \cdot \frac{\ln \frac{697}{600}}{0.05}$		

3 Rearrange this equation to solve for the time given this model of a continuously compounding growth of a share price?

$$1,014 = 900 \cdot e^{(0.06 \cdot \frac{t}{3})}$$

A	$t = 3 \cdot \frac{\ln \frac{1014}{900}}{0.06}$	B	$t = -\frac{1}{3} \cdot \frac{\ln 1014 \cdot 900}{0.06}$
C	$t = 3 \cdot \frac{0.06}{\ln \frac{1014}{900}}$		

4 Rearrange this equation to solve for the time given this model of a continuously compounding growth of a share price?

$$425 = 300 \cdot e^{(0.05 \cdot t \cdot 3)}$$

A	$t = \frac{1}{3} \cdot \frac{0.05}{\ln \frac{425}{300}}$	B	$t = \frac{1}{3} \cdot \frac{\ln \frac{425}{300}}{0.05}$
C	$t = 3 \cdot \frac{\ln \frac{425}{300}}{0.05}$	D	$t = -3 \cdot \frac{\ln 425 \cdot 300}{0.05}$

5 Rearrange this equation to solve for the time given this model of a continuously compounding growth of app downloads?

$$854 = 700 \cdot e^{(0.04 \cdot \frac{t}{7})}$$

A	$t = -\frac{1}{7} \cdot \frac{\ln 854 \cdot 700}{0.04}$	B	$t = \frac{1}{7} \cdot \frac{\ln \frac{854}{700}}{0.04}$
C	$t = 7 \cdot \frac{\ln \frac{854}{700}}{0.04}$	D	$t = 7 \cdot \frac{0.04}{\ln \frac{854}{700}}$

6 Rearrange this equation to solve for the time given this model of a continuous growth of an insect population?

$$563 = 500 \cdot e^{(0.06 \cdot \frac{t}{7})}$$

A	$t = -\frac{1}{7} \cdot \frac{\ln 563 \cdot 500}{0.06}$	B	$t = 7 \cdot \frac{0.06}{\ln \frac{563}{500}}$
C	$t = \frac{1}{7} \cdot \frac{\ln \frac{563}{500}}{0.06}$	D	$t = 7 \cdot \frac{\ln \frac{563}{500}}{0.06}$

7 Rearrange this equation to solve for the time given this model of a growth of debt on a credit card with continuous compounding?

$$901 = 800 \cdot e^{(0.04 \cdot t \cdot 3)}$$

A	$t = \frac{1}{3} \cdot \frac{0.04}{\ln \frac{901}{800}}$	B	$t = 3 \cdot \frac{\ln \frac{901}{800}}{0.04}$
C	$t = -3 \cdot \frac{\ln 901 \cdot 800}{0.04}$	D	$t = \frac{1}{3} \cdot \frac{\ln \frac{901}{800}}{0.04}$

8 Rearrange this equation to solve for the time given this model of a continuously compounding growth of a share price?

$$523 = 400 \cdot e^{(0.09 \cdot \frac{t}{3})}$$

A	$t = -\frac{1}{3} \cdot \frac{\ln 523 \cdot 400}{0.09}$	B	$t = 3 \cdot \frac{\ln \frac{523}{400}}{0.09}$
C	$t = \frac{1}{3} \cdot \frac{\ln \frac{523}{400}}{0.09}$	D	$t = 3 \cdot \frac{0.09}{\ln \frac{523}{400}}$