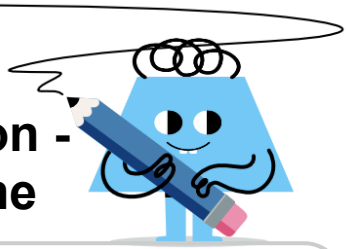
Name

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



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

$$261 = 200 \cdot e^{(r \cdot 9 \cdot 12)}$$

A $r = \dfrac{\ln \frac{261}{200}}{9 \cdot 12}$

B $r = \dfrac{\ln \frac{200}{261}}{\frac{9}{12}}$

C $r = \dfrac{e^{\frac{261}{200}}}{9 \cdot 12}$

2 Rearrange this equation to solve for the rate given this model of a continuously compounding growth of money in a savings account?

$$567 = 400 \cdot e^{(r \cdot \frac{5}{4})}$$

A $r = \dfrac{\ln \frac{400}{567}}{5 \cdot 4}$

B $r = \dfrac{e^{\frac{567}{400}}}{\frac{5}{4}}$

C $r = \dfrac{\ln \frac{567}{400}}{\frac{5}{4}}$

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

$$508 = 400 \cdot e^{(r \cdot 8 \cdot 12)}$$

A $r = \dfrac{e^{\frac{508}{400}}}{8 \cdot 12}$

B $r = \dfrac{\ln \frac{400}{508}}{\frac{8}{12}}$

C $r = \dfrac{\ln \frac{508}{400}}{8 \cdot 12}$

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

$$826 = 600 \cdot e^{(r \cdot 8 \cdot 7)}$$

A $r = \dfrac{e^{\frac{826}{600}}}{8 \cdot 7}$

B $r = \dfrac{\ln \frac{826}{600}}{8 \cdot 7}$

C $r = \dfrac{\ln \frac{600}{826}}{\frac{8}{7}}$

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

$$313 = 200 \cdot e^{(r \cdot \frac{5}{7})}$$

A $r = \dfrac{\ln \frac{313}{200}}{\frac{5}{7}}$

B $r = \dfrac{\ln \frac{200}{313}}{5 \cdot 7}$

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

$$751 = 400 \cdot e^{(r \cdot 7 \cdot 4)}$$

A $r = \dfrac{\ln \frac{751}{400}}{7 \cdot 4}$

B $r = \dfrac{e^{\frac{751}{400}}}{7 \cdot 4}$

C $r = \dfrac{\ln \frac{400}{751}}{\frac{7}{4}}$

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

$$1,372 = 800 \cdot e^{(r \cdot \frac{6}{4})}$$

A $r = \dfrac{e^{\frac{1372}{800}}}{\frac{6}{4}}$

B $r = \dfrac{\ln \frac{1372}{800}}{\frac{6}{4}}$

C $r = \dfrac{\ln \frac{800}{1372}}{6 \cdot 4}$

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

$$596 = 400 \cdot e^{(r \cdot 5 \cdot 7)}$$

A $r = \dfrac{\ln \frac{400}{596}}{\frac{5}{7}}$

B $r = \dfrac{e^{\frac{596}{400}}}{5 \cdot 7}$

C $r = \dfrac{\ln \frac{596}{400}}{5 \cdot 7}$