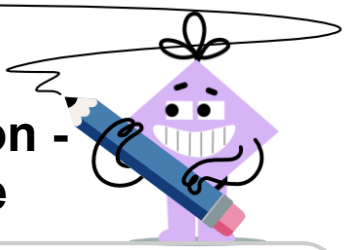
Name

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



1 Rearrange this equation to solve for the time given this model of a continuous decay of a radioactive material?

$$405 = 500 \cdot e^{(-0.07 \cdot t \cdot 24)}$$

A	$t = -\frac{1}{24} \cdot \frac{0.07}{\ln \frac{405}{500}}$	B	$t = -24 \cdot \frac{\ln \frac{405}{500}}{0.07}$
C	$t = -\frac{1}{24} \cdot \frac{\ln \frac{405}{500}}{0.07}$		

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

$$443 = 500 \cdot e^{(-0.03 \cdot \frac{t}{4})}$$

A	$t = +\frac{1}{4} \cdot \frac{\ln 443 \cdot 500}{0.03}$	B	$t = -4 \cdot \frac{0.03}{\ln \frac{443}{500}}$
C	$t = -\frac{1}{4} \cdot \frac{\ln \frac{443}{500}}{0.03}$	D	$t = -4 \cdot \frac{\ln \frac{443}{500}}{0.03}$

3 Rearrange this equation to solve for the time given this model of a continuous decline of a bird population?

$$268 = 400 \cdot e^{(-0.08 \cdot \frac{t}{4})}$$

A	$t = -\frac{1}{4} \cdot \frac{\ln \frac{268}{400}}{0.08}$	B	$t = -4 \cdot \frac{0.08}{\ln \frac{268}{400}}$
C	$t = -4 \cdot \frac{\ln \frac{268}{400}}{0.08}$		

4 Rearrange this equation to solve for the time given this model of a continuous decay of a radioactive material?

$$159 = 300 \cdot e^{(-0.07 \cdot t \cdot 24)}$$

A	$t = +24 \cdot \frac{\ln 159 \cdot 300}{0.07}$	B	$t = -\frac{1}{24} \cdot \frac{0.07}{\ln \frac{159}{300}}$
C	$t = -\frac{1}{24} \cdot \frac{\ln \frac{159}{300}}{0.07}$		

5 Rearrange this equation to solve for the time given this model of a continuous decay of a radioactive material?

$$814 = 900 \cdot e^{(-0.05 \cdot \frac{t}{24})}$$

A	$t = -\frac{1}{24} \cdot \frac{\ln \frac{814}{900}}{0.05}$	B	$t = -24 \cdot \frac{\ln \frac{814}{900}}{0.05}$
C	$t = +\frac{1}{24} \cdot \frac{\ln 814 \cdot 900}{0.05}$		

6 Rearrange this equation to solve for the time given this model of a continuous decay of a radioactive material?

$$470 = 500 \cdot e^{(-0.03 \cdot t \cdot 24)}$$

A	$t = -24 \cdot \frac{\ln \frac{470}{500}}{0.03}$	B	$t = -\frac{1}{24} \cdot \frac{\ln \frac{470}{500}}{0.03}$
C	$t = +24 \cdot \frac{\ln 470 \cdot 500}{0.03}$		

7 Rearrange this equation to solve for the time given this model of a a continuously declining bacteria population?

$$393 = 500 \cdot e^{(-0.04 \cdot t \cdot 365)}$$

A	$t = -365 \cdot \frac{\ln \frac{393}{500}}{0.04}$	B	$t = -\frac{1}{365} \cdot \frac{0.04}{\ln \frac{393}{500}}$
C	$t = -\frac{1}{365} \cdot \frac{\ln \frac{393}{500}}{0.04}$	D	$t = +365 \cdot \frac{\ln 393 \cdot 500}{0.04}$

8 Rearrange this equation to solve for the time given this model of a continuous decline of a bird population?

$$152 = 200 \cdot e^{(-0.03 \cdot t \cdot 4)}$$

A	$t = -4 \cdot \frac{\ln \frac{152}{200}}{0.03}$	B	$t = -\frac{1}{4} \cdot \frac{\ln \frac{152}{200}}{0.03}$
C	$t = -\frac{1}{4} \cdot \frac{0.03}{\ln \frac{152}{200}}$		