



Exponential Function Solution Equation - Decay (Continuous) - Equation to Time



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

$$521 = 600 \cdot e^{(-0.02 \cdot t)}$$

A $t = -\frac{\ln \frac{521}{600}}{0.02}$

B $t = -\frac{0.02}{\ln \frac{521}{600}}$

C $t = +\frac{\ln 521 \cdot 600}{0.02}$

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

$$222 = 300 \cdot e^{(-0.06 \cdot t)}$$

A $t = -\frac{0.06}{\ln \frac{222}{300}}$

B $t = +\frac{\ln 222 \cdot 300}{0.06}$

C $t = -\frac{\ln \frac{222}{300}}{0.06}$

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

$$847 = 900 \cdot e^{(-0.03 \cdot t)}$$

A $t = +\frac{\ln 847 \cdot 900}{0.03}$

B $t = -\frac{\ln \frac{847}{900}}{0.03}$

C $t = -\frac{0.03}{\ln \frac{847}{900}}$

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

$$197 = 300 \cdot e^{(-0.06 \cdot t)}$$

A $t = -\frac{\ln \frac{197}{300}}{0.06}$

B $t = +\frac{\ln 197 \cdot 300}{0.06}$

C $t = -\frac{0.06}{\ln \frac{197}{300}}$

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

$$334 = 400 \cdot e^{(-0.03 \cdot t)}$$

A $t = -\frac{\ln \frac{334}{400}}{0.03}$

B $t = +\frac{\ln 334 \cdot 400}{0.03}$

C $t = -\frac{0.03}{\ln \frac{334}{400}}$

6 Rearrange this equation to solve for the time given this model of a continuous reduction of a toxin concentration?

$$433 = 700 \cdot e^{(-0.08 \cdot t)}$$

A $t = -\frac{\ln \frac{433}{700}}{0.08}$

B $t = +\frac{\ln 433 \cdot 700}{0.08}$

C $t = -\frac{0.08}{\ln \frac{433}{700}}$

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

$$738 = 800 \cdot e^{(-0.02 \cdot t)}$$

A $t = -\frac{\ln \frac{738}{800}}{0.02}$

B $t = -\frac{0.02}{\ln \frac{738}{800}}$

C $t = +\frac{\ln 738 \cdot 800}{0.02}$

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

$$347 = 400 \cdot e^{(-0.02 \cdot t)}$$

A $t = -\frac{0.02}{\ln \frac{347}{400}}$

B $t = +\frac{\ln 347 \cdot 400}{0.02}$

C $t = -\frac{\ln \frac{347}{400}}{0.02}$