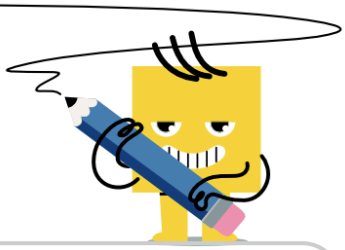
Name



Exponential Function Solving - Decay (Continuous) Equation to Rate

1 Solve for the rate given this model of a continuous reduction of a toxin concentration?

$$668 = 800 \cdot e^{(-r \cdot 9)}$$

A $r = -\frac{\ln \frac{C_0}{C}}{t}$

B $r = -\frac{e^{\frac{C}{C_0}}}{t}$

C $r = -\frac{\ln \frac{C}{C_0}}{t}$

2 Solve for the rate given this model of a continuous decline of a whale population?

$$514 = 900 \cdot e^{(-r \cdot 8)}$$

A $r = -\frac{\ln \frac{P_0}{P}}{t}$

B $r = -\frac{e^{\frac{P}{P_0}}}{t}$

C $r = -\frac{\ln \frac{P}{P_0}}{t}$

3 Solve for the rate of decay given this model of a continuous decay of a radioactive material?

$$226 = 300 \cdot e^{(-r \cdot 4)}$$

A $r = -\frac{e^{\frac{R}{R_0}}}{t}$

B $r = -\frac{\ln \frac{R}{R_0}}{t}$

4 Solve for the rate of decay given this model of a continuous decay of a radioactive material?

$$525 = 800 \cdot e^{(-r \cdot 7)}$$

A $r = -\frac{\ln \frac{R_0}{R}}{t}$

B $r = -\frac{e^{\frac{R}{R_0}}}{t}$

C $r = -\frac{\ln \frac{R}{R_0}}{t}$

5 Solve for the rate given this model of a a continuously declining bacteria population?

$$470 = 500 \cdot e^{(-r \cdot 3)}$$

A $r = -\frac{e^{\frac{P}{P_0}}}{t}$

B $r = -\frac{\ln \frac{P}{P_0}}{t}$

C $r = -\frac{\ln \frac{P_0}{P}}{t}$

6 Solve for the rate of decay given this model of a continuous decay of a radioactive material?

$$393 = 500 \cdot e^{(-r \cdot 4)}$$

A $r = -\frac{\ln \frac{R}{R_0}}{t}$

B $r = -\frac{e^{\frac{R}{R_0}}}{t}$

7 Solve for the rate given this model of a a continuously declining bacteria population?

$$328 = 500 \cdot e^{(-r \cdot 7)}$$

A $r = -\frac{\ln \frac{P}{P_0}}{t}$

B $r = -\frac{\ln \frac{P_0}{P}}{t}$

8 Solve for the rate given this model of a continuous decline of a whale population?

$$167 = 200 \cdot e^{(-r \cdot 3)}$$

A $r = -\frac{\ln \frac{P_0}{P}}{t}$

B $r = -\frac{e^{\frac{P}{P_0}}}{t}$

C $r = -\frac{\ln \frac{P}{P_0}}{t}$