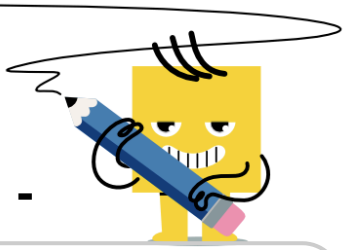
Name

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



1 Solve for the time given this model of a continuous decline of a whale population?

$$666 = 900 \cdot e^{(-0.06 \cdot t \cdot 4)}$$

A $t = -4 \cdot \frac{\ln P \cdot P_0}{r}$	B $t = -\frac{1}{4} \cdot \frac{\ln \frac{P}{P_0}}{r}$
C $t = -4 \cdot \frac{\ln \frac{P}{P_0}}{r}$	

2 Solve for the time given this model of a continuous decline of a bird population?

$$709 = 800 \cdot e^{(-0.04 \cdot t \cdot 4)}$$

A $t = -4 \cdot \frac{\ln \frac{P}{P_0}}{r}$	B $t = -\frac{1}{4} \cdot \frac{\ln \frac{P}{P_0}}{r}$
C $t = -4 \cdot \frac{\ln P \cdot P_0}{r}$	

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

$$435 = 600 \cdot e^{(-0.08 \cdot \frac{t}{24})}$$

A $t = -\frac{1}{24} \cdot \frac{\ln R \cdot R_0}{r}$	B $t = -24 \cdot \frac{\ln \frac{R}{R_0}}{r}$
C $t = -24 \cdot \frac{r}{\ln \frac{R}{R_0}}$	

4 Solve for the time given this model of a continuous decline of a bird population?

$$405 = 500 \cdot e^{(-0.03 \cdot t \cdot 4)}$$

A $t = -\frac{1}{4} \cdot \frac{\ln \frac{P}{P_0}}{r}$	B $t = -4 \cdot \frac{\ln \frac{P}{P_0}}{r}$

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

$$584 = 700 \cdot e^{(-0.03 \cdot \frac{t}{7})}$$

A $t = -7 \cdot \frac{\ln \frac{P}{P_0}}{r}$	B $t = -\frac{1}{7} \cdot \frac{\ln P \cdot P_0}{r}$
C $t = -7 \cdot \frac{r}{\ln \frac{P}{P_0}}$	

6 Solve for the time given this model of a continuous decline of a whale population?

$$723 = 800 \cdot e^{(-0.05 \cdot t \cdot 4)}$$

A $t = -\frac{1}{4} \cdot \frac{r}{\ln \frac{P}{P_0}}$	B $t = -\frac{1}{4} \cdot \frac{\ln \frac{P}{P_0}}{r}$
C $t = -4 \cdot \frac{\ln \frac{P}{P_0}}{r}$	

7 Solve for the time given this model of a continuous decay of a radioactive material?

$$255 = 400 \cdot e^{(-0.05 \cdot \frac{t}{7})}$$

A $t = -\frac{1}{7} \cdot \frac{\ln \frac{R}{R_0}}{r}$	B $t = -7 \cdot \frac{\ln \frac{R}{R_0}}{r}$
C $t = -7 \cdot \frac{r}{\ln \frac{R}{R_0}}$	

8 Solve for the time given this model of a continuous reduction of a toxin concentration?

$$653 = 900 \cdot e^{(-0.08 \cdot \frac{t}{24})}$$

A $t = -\frac{1}{24} \cdot \frac{\ln \frac{C}{C_0}}{r}$	B $t = -\frac{1}{24} \cdot \frac{\ln C \cdot C_0}{r}$
C $t = -24 \cdot \frac{\ln \frac{C}{C_0}}{r}$	