



Exponential Function Solving - Decay (Continuous) Equation to Value at Time

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

$$P = 400 \cdot e^{(-0.09 \cdot 6)}$$

A $P = P_0 - e^{(-r \cdot t)}$

B $P = P_0 \cdot e^{(\frac{r}{t})}$

C $P = P_0 \cdot e^{(-r \cdot t)}$

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

$$P = 800 \cdot e^{(-0.05 \cdot 9)}$$

A $P = P_0 \cdot e^{(-r \cdot t)}$

B $P = P_0 \cdot e^{(\frac{r}{t})}$

C $P = P_0 - e^{(-r \cdot t)}$

3 Solve for the final concentration given this model of a continuous reduction of a toxin concentration?

$$C = 600 \cdot e^{(-0.05 \cdot 3)}$$

A $C = C_0 - e^{(-r \cdot t)}$

B $C = C_0 \cdot e^{(\frac{r}{t})}$

C $C = C_0 \cdot e^{(-r \cdot t)}$

4 Solve for the final concentration given this model of a continuous reduction of a toxin concentration?

$$C = 200 \cdot e^{(-0.04 \cdot 5)}$$

A $C = C_0 \cdot e^{(-r \cdot t)}$

B $C = C_0 \cdot e^{(\frac{r}{t})}$

C $C = C_0 - e^{(-r \cdot t)}$

5 Solve for the final concentration given this model of a continuous decay of a radioactive material?

$$R = 900 \cdot e^{(-0.07 \cdot 5)}$$

A $R = R_0 \cdot e^{(\frac{r}{t})}$

B $R = R_0 - e^{(-r \cdot t)}$

C $R = R_0 \cdot e^{(-r \cdot t)}$

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

$$R = 800 \cdot e^{(-0.02 \cdot 5)}$$

A $R = R_0 \cdot e^{(-r \cdot t)}$

B $R = R_0 - e^{(-r \cdot t)}$

C $R = R_0 \cdot e^{(\frac{r}{t})}$

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

$$R = 200 \cdot e^{(-0.04 \cdot 9)}$$

A $R = R_0 \cdot e^{(-r \cdot t)}$

B $R = R_0 \cdot e^{(\frac{r}{t})}$

C $R = R_0 - e^{(-r \cdot t)}$

8 Solve for the final population given this model of a continuous decline of a bird population?

$$P = 800 \cdot e^{(-0.03 \cdot 9)}$$

A $P = P_0 \cdot e^{(\frac{r}{t})}$

B $P = P_0 - e^{(-r \cdot t)}$

C $P = P_0 \cdot e^{(-r \cdot t)}$