



## Exponential Function Solving - Growth (Continuous) Equation to Starting Value

1 Solve for the starting downloads given this model of a continuously compounding growth of app downloads?

$$447 = A_0 \cdot e^{(0.08 \cdot 5)}$$

A  $A_0 = \frac{A}{e^{(r \cdot t)}}$

B  $A_0 = \frac{e^{(r \cdot t)}}{A}$

2 Solve for the starting population given this model of a continuous growth of a rabbit population?

$$530 = P_0 \cdot e^{(0.02 \cdot 3)}$$

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

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

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

3 Solve for the starting views given this model of a continuous exponential growth of social media post views?

$$1,239 = V_0 \cdot e^{(0.04 \cdot 8)}$$

A  $V_0 = \frac{V}{e^{(r \cdot t)}}$

B  $V_0 = \frac{V}{e^{(\frac{r}{t})}}$

C  $V_0 = \frac{e^{(r \cdot t)}}{V}$

4 Solve for the starting population given this model of a continuous growth of an insect population?

$$889 = P_0 \cdot e^{(0.08 \cdot 3)}$$

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

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

5 Solve for the starting downloads given this model of a continuously compounding growth of app downloads?

$$442 = A_0 \cdot e^{(0.05 \cdot 2)}$$

A  $A_0 = \frac{A}{e^{(\frac{r}{t})}}$

B  $A_0 = \frac{A}{e^{(r \cdot t)}}$

C  $A_0 = \frac{e^{(r \cdot t)}}{A}$

6 Solve for the starting population given this model of a continuous growth of a rabbit population?

$$484 = P_0 \cdot e^{(0.08 \cdot 6)}$$

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

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

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

7 Solve for the starting downloads given this model of a continuously compounding growth of app downloads?

$$470 = A_0 \cdot e^{(0.09 \cdot 5)}$$

A  $A_0 = \frac{e^{(r \cdot t)}}{A}$

B  $A_0 = \frac{A}{e^{(r \cdot t)}}$

C  $A_0 = \frac{A}{e^{(\frac{r}{t})}}$

8 Solve for the starting population given this model of a continuous growth of a bacteria population?

$$1,502 = P_0 \cdot e^{(0.07 \cdot 9)}$$

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

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