Name

Exponential Function Solution Equation - Growth (Discrete) Scenario to Starting Value

1

A savings account starts with a certain amount of cash. Each subsequent year it earns 5% in interest. After 3 years it has $231.

Rearrange the exponential equation to solve for for the starting cash given this scenario?

A $P_0 = \frac{231}{(1+0.05)^3}$

B $P_0 = \frac{231}{(1-0.05)^3}$

2

An insect population starts at a certain size. Each subsequent yearly breeding season it grows by 4%. After 6 years it has increased to a population of 253.

Rearrange the exponential equation to solve for for the starting population given this scenario?

A $P_0 = \frac{253}{(1-0.04)^6}$

B $P_0 = \frac{253}{(1+0.04)^6}$

C $P_0 = 253 \cdot (1+0.04)^6$

3

A savings account starts with a certain amount of cash. Each subsequent quarter it earns 9% in interest. After 2 quarters it has $950.

Rearrange the exponential equation to solve for for the starting cash given this scenario?

A $P_0 = \frac{950}{(1-0.09)^2}$

B $P_0 = \frac{950}{(1+0.09)^2}$

4

An insect population starts at a certain size. Each subsequent yearly breeding season it grows by 4%. After 7 years it has increased to a population of 263.

Rearrange the exponential equation to solve for for the starting population given this scenario?

A $P_0 = \frac{263}{(1+0.04)^7}$

B $P_0 = \frac{263}{(1-0.04)^7}$

C $P_0 = 263 \cdot (1+0.04)^7$

5

An insect population starts at a certain size. Each subsequent yearly breeding season it grows by 6%. After 8 years it has increased to a population of 478.

Rearrange the exponential equation to solve for for the starting population given this scenario?

A $P_0 = 478 \cdot (1+0.06)^8$

B $P_0 = \frac{478}{(1+0.06)^8}$

C $P_0 = \frac{478}{(1-0.06)^8}$

6

A savings account starts with a certain amount of cash. Each subsequent year it earns 8% in interest. After 9 years it has $599.

Rearrange the exponential equation to solve for for the starting cash given this scenario?

A $P_0 = \frac{599}{(1+0.08)^9}$

B $P_0 = \frac{599}{(1-0.08)^9}$

C $P_0 = 599 \cdot (1+0.08)^9$

7

A savings account starts with a certain amount of cash. Each subsequent quarter it earns 6% in interest. After 8 quarters it has $478.

Rearrange the exponential equation to solve for for the starting cash given this scenario?

A $P_0 = 478 \cdot (1+0.06)^8$

B $P_0 = \frac{478}{(1+0.06)^8}$

C $P_0 = \frac{478}{(1-0.06)^8}$

8

A rabbit population starts at a certain size. Each subsequent yearly breeding season it grows by 5%. After 3 years it has increased to a population of 926 rabbits.

Rearrange the exponential equation to solve for for the starting population given this scenario?

A $P_0 = \frac{926}{(1-0.05)^3}$

B $P_0 = \frac{926}{(1+0.05)^3}$