



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

1

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

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 394.

$$A_{P_0} = \frac{394}{(1 - 0.04)^7} \quad B_{P_0} = 394 \cdot (1 + 0.04)^7$$

$$C_{P_0} = \frac{394}{(1 + 0.04)^7}$$

2

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

A savings account starts with a certain amount of cash. Each subsequent year it earns 6% in interest. After 3 years it has \$595.

$$A_{P_0} = \frac{595}{(1 - 0.06)^3} \quad B_{P_0} = \frac{595}{(1 + 0.06)^3}$$

$$C_{P_0} = 595 \cdot (1 + 0.06)^3$$

3

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

A savings account starts with a certain amount of cash. Each subsequent year it earns 4% in interest. After 9 years it has \$853.

$$A_{P_0} = \frac{853}{(1 + 0.04)^9} \quad B_{P_0} = 853 \cdot (1 + 0.04)^9$$

$$C_{P_0} = \frac{853}{(1 - 0.04)^9}$$

4

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

An insect population starts at a certain size. Each subsequent yearly breeding season it grows by 9%. After 6 years it has increased to a population of 1,341.

$$A_{P_0} = 1341 \cdot (1 + 0.09)^6 \quad B_{P_0} = \frac{1341}{(1 + 0.09)^6}$$

$$C_{P_0} = \frac{1341}{(1 - 0.09)^6}$$

5

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

A rabbit population starts at a certain size. Each subsequent yearly breeding season it grows by 7%. After 8 years it has increased to a population of 1,030 rabbits.

$$A_{P_0} = \frac{1030}{(1 - 0.07)^8} \quad B_{P_0} = 1030 \cdot (1 + 0.07)^8$$

$$C_{P_0} = \frac{1030}{(1 + 0.07)^8}$$

6

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

An insect population starts at a certain size. Each subsequent yearly breeding season it grows by 6%. After 9 years it has increased to a population of 675.

$$A_{P_0} = \frac{675}{(1 + 0.06)^9} \quad B_{P_0} = \frac{675}{(1 - 0.06)^9}$$

7

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

A rabbit population starts at a certain size. Each subsequent yearly breeding season it grows by 3%. After 9 years it has increased to a population of 1,043 rabbits.

$$A_{P_0} = 1043 \cdot (1 + 0.03)^9$$

$$B_{P_0} = \frac{1043}{(1 + 0.03)^9}$$

8

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

A rabbit population starts at a certain size. Each subsequent yearly breeding season it grows by 2%. After 9 years it has increased to a population of 478 rabbits.

$$A_{P_0} = \frac{478}{(1 + 0.02)^9} \quad B_{P_0} = 478 \cdot (1 + 0.02)^9$$

$$C_{P_0} = \frac{478}{(1 - 0.02)^9}$$