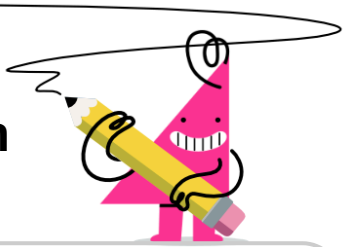
Name

Exponential Function Solving - Growth (Discrete) Scenario to Starting Value



1

An insect 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 717.

How would you solve for the starting population given this scenario?

A $P_0 = \frac{P}{(1+r)^t}$

B $P_0 = \frac{P}{(1-r)^t}$

C $P_0 = P \cdot (1+r)^t$

2

A credit card starts with a certain amount of debt. Each subsequent year it grows by 2% in interest. After 8 years the debt has grown to $820.

How would you solve for the starting debt given this scenario?

A $D_0 = \frac{D}{(1-r)^t}$

B $D_0 = \frac{D}{(1+r)^t}$

C $D_0 = D \cdot (1+r)^t$

3

A savings account starts with a certain amount of cash. Each subsequent month it earns 6% in interest. After 9 months it has $1,351.

How would you solve for the starting cash given this scenario?

A $P_0 = \frac{P}{(1-r)^t}$

B $P_0 = \frac{P}{(1+r)^t}$

C $P_0 = P \cdot (1+r)^t$

4

A savings account starts with a certain amount of cash. Each subsequent month it earns 4% in interest. After 9 months it has $426.

How would you solve for the starting cash given this scenario?

A $P_0 = \frac{P}{(1+r)^t}$

B $P_0 = P \cdot (1+r)^t$

C $P_0 = \frac{P}{(1-r)^t}$

5

A savings account starts with a certain amount of cash. Each subsequent year it earns 6% in interest. After 2 years it has $561.

How would you solve for the starting cash given this scenario?

A $P_0 = \frac{P}{(1+r)^t}$

B $P_0 = \frac{P}{(1-r)^t}$

C $P_0 = P \cdot (1+r)^t$

6

An insect population starts at a certain size. Each subsequent yearly breeding season it grows by 7%. After 4 years it has increased to a population of 1,048.

How would you solve for the starting population given this scenario?

A $P_0 = \frac{P}{(1+r)^t}$

B $P_0 = \frac{P}{(1-r)^t}$

C $P_0 = P \cdot (1+r)^t$

7

An insect population starts at a certain size. Each subsequent yearly breeding season it grows by 2%. After 7 years it has increased to a population of 918.

How would you solve for the starting population given this scenario?

A $P_0 = P \cdot (1+r)^t$

B $P_0 = \frac{P}{(1+r)^t}$

C $P_0 = \frac{P}{(1-r)^t}$

8

A credit card starts with a certain amount of debt. Each subsequent quarter it grows by 3% in interest. After 8 quarters the debt has grown to $253.

How would you solve for the starting debt given this scenario?

A $D_0 = D \cdot (1+r)^t$

B $D_0 = \frac{D}{(1-r)^t}$

C $D_0 = \frac{D}{(1+r)^t}$