mobius

Exponential Function Solving - Growth (Discrete) Scenario to Rate

1

A credit card starts with $800 of debt. Each subsequent year it grows by a certain percent interest. After 9 years the debt has grown to $1,138.

How would you solve for the rate given this scenario?

A $r = +(\frac{D}{D_0})^{\frac{t}{2}} - 1$	B $r = +(\frac{D}{D_0})^{\frac{1}{t}} - 1$
C $r = +(\frac{D}{D_0})^{\frac{1}{t}} + 1$	

2

A credit card starts with $700 of debt. Each subsequent year it grows by a certain percent interest. After 4 years the debt has grown to $883.

How would you solve for the rate given this scenario?

A $r = +(\frac{D}{D_0})^{\frac{t}{2}} - 1$	B $r = +(\frac{D}{D_0})^{\frac{1}{t}} + 1$
C $r = +(\frac{D}{D_0})^{\frac{1}{t}} - 1$	

3

A rabbit population starts at 200. Each subsequent yearly breeding season it grows by a certain percent. After 6 years it has increased to a population of 253 rabbits.

How would you solve for the rate given this scenario?

A $r = +(\frac{P}{P_0})^{\frac{1}{t}} + 1$	B $r = +(\frac{P}{P_0})^{\frac{t}{2}} - 1$
C $r = +(\frac{P}{P_0})^{\frac{1}{t}} - 1$	

4

An insect population starts at 500. Each subsequent yearly breeding season it grows by a certain percent. After 3 years it has increased to a population of 629.

How would you solve for the rate given this scenario?

A $r = +(\frac{P}{P_0})^{\frac{t}{2}} - 1$	B $r = +(\frac{P}{P_0})^{\frac{1}{t}} - 1$
C $r = +(\frac{P}{P_0})^{\frac{1}{t}} + 1$	

5

A rabbit population starts at 400. Each subsequent yearly breeding season it grows by a certain percent. After 7 years it has increased to a population of 491 rabbits.

How would you solve for the rate given this scenario?

A $r = +(\frac{P}{P_0})^{\frac{t}{2}} - 1$	B $r = +(\frac{P}{P_0})^{\frac{1}{t}} + 1$
C $r = +(\frac{P}{P_0})^{\frac{1}{t}} - 1$	

6

A savings account starts with $900. Each subsequent month it earns a certain percent interest. After 5 months it has $1,204.

How would you solve for the rate given this scenario?

A	B
$r = +(\frac{P}{P_0})^{\frac{t}{2}} - 1$	$r = +(\frac{P}{P_0})^{\frac{1}{t}} - 1$

7

An insect population starts at 400. Each subsequent yearly breeding season it grows by a certain percent. After 2 years it has increased to a population of 449.

How would you solve for the rate given this scenario?

A	B
$r = +(\frac{P}{P_0})^{\frac{1}{t}} - 1$	$r = +(\frac{P}{P_0})^{\frac{t}{2}} - 1$

8

A rabbit population starts at 700. Each subsequent yearly breeding season it grows by a certain percent. After 8 years it has increased to a population of 820 rabbits.

How would you solve for the rate given this scenario?

A $r = +(\frac{P}{P_0})^{\frac{1}{t}} + 1$	B $r = +(\frac{P}{P_0})^{\frac{t}{2}} - 1$
C $r = +(\frac{P}{P_0})^{\frac{1}{t}} - 1$	