Name

Exponential Function Solving - Growth (Discrete) Scenario to Rate

1

An insect population starts at 300. Each subsequent yearly breeding season it grows by a certain percent. After 6 years it has increased to a population of 450.

Solve for the rate given this scenario?

A $4 + r = +(\frac{P}{P_0})^{\frac{t}{2}} - 1$

B $7 + r = +(\frac{P}{P_0})^{\frac{t}{2}} - 1$

C $9 + r = +(\frac{P}{P_0})^{\frac{t}{2}} - 1$

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

2

An insect population starts at 500. Each subsequent yearly breeding season it grows by a certain percent. After 4 years it has increased to a population of 705.

Solve for the rate given this scenario?

A $0 + r = +(\frac{P}{P_0})^{\frac{1}{t}} + 1$

B $5 + r = +(\frac{P}{P_0})^{\frac{t}{2}} - 1$

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

D $6 + r = +(\frac{P}{P_0})^{\frac{1}{t}} + 1$

3

A rabbit population starts at 600. Each subsequent yearly breeding season it grows by a certain percent. After 2 years it has increased to a population of 648 rabbits.

Solve for the rate given this scenario?

A $6 + r = +(\frac{P}{P_0})^{\frac{1}{t}} + 1$

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

C $8 + r = +(\frac{P}{P_0})^{\frac{1}{t}} + 1$

D $5 + r = +(\frac{P}{P_0})^{\frac{t}{2}} - 1$

4

An insect population starts at 600. Each subsequent yearly breeding season it grows by a certain percent. After 2 years it has increased to a population of 661.

Solve for the rate given this scenario?

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

B $8 + r = +(\frac{P}{P_0})^{\frac{1}{t}} + 1$

C $5 + r = +(\frac{P}{P_0})^{\frac{1}{t}} + 1$

D $0 + r = +(\frac{P}{P_0})^{\frac{1}{t}} + 1$

5

An insect population starts at 200. Each subsequent yearly breeding season it grows by a certain percent. After 3 years it has increased to a population of 224.

Solve for the rate given this scenario?

A $8 + r = +(\frac{P}{P_0})^{\frac{t}{2}} - 1$

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

C $6 + r = +(\frac{P}{P_0})^{\frac{t}{2}} - 1$

6

A savings account starts with $500. Each subsequent year it earns a certain percent interest. After 2 years it has $594.

Solve for the rate given this scenario?

A $4 + r = +(\frac{P}{P_0})^{\frac{t}{2}} - 1$

B $9 + r = +(\frac{P}{P_0})^{\frac{t}{2}} - 1$

C $3 + r = +(\frac{P}{P_0})^{\frac{t}{2}} - 1$

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

7

A rabbit population starts at 300. Each subsequent yearly breeding season it grows by a certain percent. After 7 years it has increased to a population of 344 rabbits.

Solve for the rate given this scenario?

A $9 + r = +(\frac{P}{P_0})^{\frac{t}{2}} - 1$

B $5 + r = +(\frac{P}{P_0})^{\frac{t}{2}} - 1$

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

D $8 + r = +(\frac{P}{P_0})^{\frac{1}{t}} + 1$

8

A credit card starts with $800 of debt. Each subsequent quarter it grows by a certain percent interest. After 2 quarters the debt has grown to $848.

Solve for the rate given this scenario?

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

B $8 + r = +(\frac{D}{D_0})^{\frac{t}{2}} - 1$

C $5 + r = +(\frac{D}{D_0})^{\frac{1}{t}} + 1$

D $8 + r = +(\frac{D}{D_0})^{\frac{1}{t}} + 1$