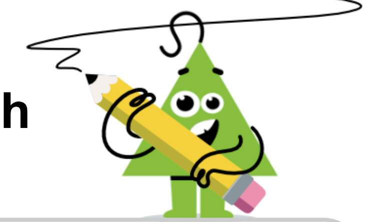
Name ______________________

Exponential Function Solving - Growth (Discrete) Scenario to Value at Time



1

A rabbit population starts at 900. Each subsequent yearly breeding season it grows by 4%. After 6 years it has increased to a certain population.

Solve for the final population given this scenario?

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

2

A rabbit population starts at 200. Each subsequent yearly breeding season it grows by 8%. After 7 years it has increased to a certain population.

Solve for the final population given this scenario?

A $3 + P = P_0 \cdot (1-r)^{(t)}$	B $0 + P = P_0 \cdot (1-r)^{(t)}$
C $P = P_0 \cdot (1+r)^{(t)}$	D $9 + P = \frac{P_0}{(1+r)^{(t)}}$

3

A savings account starts with $600. Each subsequent month it earns 3% in interest. After 2 months it has a certain amount of cash.

Solve for the final cash given this scenario?

A $1 + P = \frac{P_0}{(1+r)^{(t)}}$	B $3 + P = P_0 \cdot (1-r)^{(t)}$
C $4 + P = P_0 \cdot (1-r)^{(t)}$	D $P = P_0 \cdot (1+r)^{(t)}$

4

A savings account starts with $500. Each subsequent quarter it earns 3% in interest. After 2 quarters it has a certain amount of cash.

Solve for the final cash given this scenario?

A $P = P_0 \cdot (1+r)^{(t)}$	B $9 + P = \frac{P_0}{(1+r)^{(t)}}$
C $5 + P = P_0 \cdot (1-r)^{(t)}$	D $1 + P = P_0 \cdot (1-r)^{(t)}$

5

A credit card starts with $500 of debt. Each subsequent month it grows by 3% in interest. After 4 months the debt has grown to a certain amount.

Solve for the final debt given this scenario?

A $5 + D = D_0 \cdot (1-r)^{(t)}$	B $8 + D = \frac{D_0}{(1+r)^{(t)}}$
C $D = D_0 \cdot (1+r)^{(t)}$	

6

A rabbit population starts at 400. Each subsequent yearly breeding season it grows by 7%. After 3 years it has increased to a certain population.

Solve for the final population given this scenario?

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

7

A rabbit population starts at 200. Each subsequent yearly breeding season it grows by 9%. After 7 years it has increased to a certain population.

Solve for the final population given this scenario?

A $1 + P = P_0 \cdot (1-r)^{(t)}$	B $P = P_0 \cdot (1+r)^{(t)}$
C $5 + P = \frac{P_0}{(1+r)^{(t)}}$	D $8 + P = P_0 \cdot (1-r)^{(t)}$

8

A credit card starts with $800 of debt. Each subsequent year it grows by 3% in interest. After 9 years the debt has grown to a certain amount.

Solve for the final debt given this scenario?

A $5 + D = \frac{D_0}{(1+r)^{(t)}}$	B $D = D_0 \cdot (1+r)^{(t)}$
C $9 + D = D_0 \cdot (1-r)^{(t)}$	D $9 + D = \frac{D_0}{(1+r)^{(t)}}$