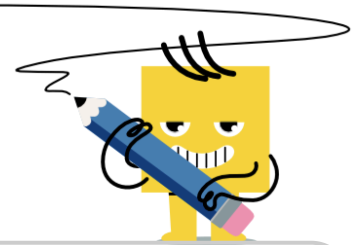
Name ____________________

mobius

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



1

A toxin starts at a concentration of 400mg/L. Each weekly dialysis reduces it by 5%. After 6 weeks it has decreased to a certain concentration.

Solve for the final concentration given this scenario?

A $C = C_0 \cdot (1-r)^{(t)}$	B $4 + C = C_0 \cdot (1+r)^{(t)}$
C $8 + C = \dfrac{C_0}{(1-r)^{(t)}}$	D $9 + C = \dfrac{C_0}{(1-r)^{(t)}}$

2

A toxin starts at a concentration of 300mg/L. Each weekly dialysis reduces it by 6%. After 4 weeks it has decreased to a certain concentration.

Solve for the final concentration given this scenario?

A $C = C_0 \cdot (1-r)^{(t)}$	B $6 + C = C_0 \cdot (1+r)^{(t)}$
C $3 + C = C_0 \cdot (1+r)^{(t)}$	D $5 + C = \dfrac{C_0}{(1-r)^{(t)}}$

3

A toxin starts at a concentration of 900mg/L. Each weekly dialysis reduces it by 7%. After 4 weeks it has decreased to a certain concentration.

Solve for the final concentration given this scenario?

A $9 + C = C_0 \cdot (1+r)^{(t)}$	B $6 + C = \dfrac{C_0}{(1-r)^{(t)}}$
C $1 + C = \dfrac{C_0}{(1-r)^{(t)}}$	D $C = C_0 \cdot (1-r)^{(t)}$

4

A bird population starts at 900. Each subsequent year it declines by 7%. After 8 years it has decreased to a certain population.

Solve for the final population given this scenario?

A $9 + P = \dfrac{P_0}{(1-r)^{(t)}}$	B $P = P_0 \cdot (1-r)^{(t)}$
C $7 + P = \dfrac{P_0}{(1-r)^{(t)}}$	D $7 + P = P_0 \cdot (1+r)^{(t)}$

5

A whale population starts at 300. Each subsequent year it declines by 6%. After 8 years it has decreased to a certain population.

Solve for the final population given this scenario?

A $3 + P = P_0 \cdot (1+r)^{(t)}$	B $P = P_0 \cdot (1-r)^{(t)}$
C $7 + P = \dfrac{P_0}{(1-r)^{(t)}}$	D $6 + P = P_0 \cdot (1+r)^{(t)}$

6

A whale population starts at 400. Each subsequent year it declines by 5%. After 3 years it has decreased to a certain population.

Solve for the final population given this scenario?

A $P = P_0 \cdot (1-r)^{(t)}$	B $0 + P = \dfrac{P_0}{(1-r)^{(t)}}$
C $7 + P = \dfrac{P_0}{(1-r)^{(t)}}$	D $4 + P = \dfrac{P_0}{(1-r)^{(t)}}$

7

A whale population starts at 700. Each subsequent year it declines by 5%. After 4 years it has decreased to a certain population.

Solve for the final population given this scenario?

A $P = P_0 \cdot (1-r)^{(t)}$	B $6 + P = P_0 \cdot (1+r)^{(t)}$
C $4 + P = P_0 \cdot (1+r)^{(t)}$	D $4 + P = \dfrac{P_0}{(1-r)^{(t)}}$

8

A toxin starts at a concentration of 300mg/L. Each daily dialysis reduces it by 4%. After 8 days it has decreased to a certain concentration.

Solve for the final concentration given this scenario?

A $C = C_0 \cdot (1-r)^{(t)}$	B $1 + C = \dfrac{C_0}{(1-r)^{(t)}}$
C $4 + C = C_0 \cdot (1+r)^{(t)}$	D $6 + C = \dfrac{C_0}{(1-r)^{(t)}}$