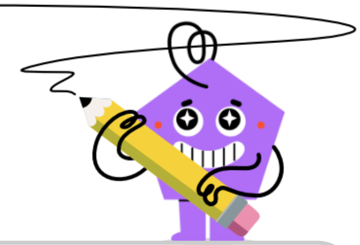
Name ______________________

mobius

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



1 Solve for the final concentration given this model of a decline of a toxin concentration (monthly dialysis)?

$$C = 600 \cdot (1 - 0.02)^{(8)}$$

A $C = C_0 \cdot (1-r)^{(t)}$

B $C = C_0 \cdot (1+r)^{(t)}$

C $C = \frac{C_0}{(1-r)^{(t)}}$

2 Solve for the final cash given this model of a balance of a charitable endowment (daily disbursements)?

$$P = 700 \cdot (1 - 0.06)^{(8)}$$

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

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

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

3 Solve for the final population given this model of a decline of a bird population (yearly breeding cycle)?

$$P = 300 \cdot (1 - 0.09)^{(8)}$$

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

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

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

4 Solve for the final cash given this model of a balance of a charitable endowment (daily disbursements)?

$$P = 400 \cdot (1 - 0.06)^{(3)}$$

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

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

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

5 Solve for the final concentration given this model of a decline of a toxin concentration (weekly dialysis)?

$$C = 200 \cdot (1 - 0.06)^{(5)}$$

A $C = C_0 \cdot (1-r)^{(t)}$

B $C = C_0 \cdot (1+r)^{(t)}$

6 Solve for the final population given this model of a decline of a whale population (yearly breeding cycle)?

$$P = 800 \cdot (1 - 0.07)^{(4)}$$

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

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

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

7 Solve for the final concentration given this model of a decline of a toxin concentration (weekly dialysis)?

$$C = 800 \cdot (1 - 0.05)^{(4)}$$

A $C = C_0 \cdot (1-r)^{(t)}$

B $C = \frac{C_0}{(1-r)^{(t)}}$

C $C = C_0 \cdot (1+r)^{(t)}$

8 Solve for the final concentration given this model of a decline of a toxin concentration (monthly dialysis)?

$$C = 300 \cdot (1 - 0.08)^{(6)}$$

A $C = C_0 \cdot (1-r)^{(t)}$

B $C = \frac{C_0}{(1-r)^{(t)}}$