Name ______________________

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

1 Solve for the final population given this model of a continuous decline of a bird population?

$$P = 900 \cdot e^{(-0.04 \cdot 5)}$$

A $4 + P = P_0 - e^{(-r \cdot t)}$

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

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

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

2 Solve for the final population given this model of a continuous decline of a bird population?

$$P = 300 \cdot e^{(-0.05 \cdot 8)}$$

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

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

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

3 Solve for the final population given this model of a continuous decline of a bird population?

$$P = 300 \cdot e^{(-0.04 \cdot 9)}$$

A $P = P_0 \cdot e^{(-r \cdot t)}$

B $0 + P = P_0 \cdot e^{(\frac{-r}{t})}$

C $7 + P = P_0 \cdot e^{(\frac{-r}{t})}$

D $9 + P = P_0 \cdot e^{(\frac{-r}{t})}$

4 Solve for the final population given this model of a a continuously declining bacteria population?

$$P = 600 \cdot e^{(-0.08 \cdot 2)}$$

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

B $3 + P = P_0 - e^{(-r \cdot t)}$

C $8 + P = P_0 - e^{(-r \cdot t)}$

D $P = P_0 \cdot e^{(-r \cdot t)}$

5 Solve for the final population given this model of a continuous decline of a bird population?

$$P = 200 \cdot e^{(-0.04 \cdot 3)}$$

A $8 + P = P_0 - e^{(-r \cdot t)}$

B $0 + P = P_0 \cdot e^{(\frac{-r}{t})}$

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

6 Solve for the final population given this model of a a continuously declining bacteria population?

$$P = 900 \cdot e^{(-0.02 \cdot 7)}$$

A $9 + P = P_0 - e^{(-r \cdot t)}$

B $7 + P = P_0 - e^{(-r \cdot t)}$

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

D $8 + P = P_0 - e^{(-r \cdot t)}$

7 Solve for the final population given this model of a a continuously declining bacteria population?

$$P = 800 \cdot e^{(-0.05 \cdot 9)}$$

A $0 + P = P_0 - e^{(-r \cdot t)}$

B $6 + P = P_0 \cdot e^{(\frac{-r}{t})}$

C $6 + P = P_0 - e^{(-r \cdot t)}$

D $P = P_0 \cdot e^{(-r \cdot t)}$

8 Solve for the final population given this model of a continuous decline of a bird population?

$$P = 300 \cdot e^{(-0.04 \cdot 8)}$$

A $P = P_0 \cdot e^{(-r \cdot t)}$

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

C $5 + P = P_0 - e^{(-r \cdot t)}$

D $0 + P = P_0 - e^{(-r \cdot t)}$