Exponential Function Solution Equation - Growth (Continuous) Equation to Starting Value

Name _____

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1 Rearrange this equation to solve for the starting debt given this model of a growth of debt on a credit card with continuous compounding?

$$264 = D_0 \cdot e^{(0.04 \cdot 7)}$$

A		B	
$D_0 = \dfrac{264}{e^{\left(\frac{0.04}{7}\right)}}$		$D_0 = \dfrac{e^{(0.04 \cdot 7)}}{264}$	
C			
$D_0 = \dfrac{264}{e^{(0.04 \cdot 7)}}$			

2 Rearrange this equation to solve for the starting cash given this model of a continuously compounding growth of money in a savings account?

$$1,217 = P_0 \cdot e^{(0.07 \cdot 6)}$$

A		B	
$P_0 = \dfrac{1217}{e^{(0.07 \cdot 6)}}$		$P_0 = \dfrac{1217}{e^{\left(\frac{0.07}{6}\right)}}$	
C			
$P_0 = \dfrac{e^{(0.07 \cdot 6)}}{1217}$			

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3 Rearrange this equation to solve for the starting downloads given this model of a continuously compounding growth of app downloads?

$$977 = A_0 \cdot e^{(0.05 \cdot 4)}$$

A	B
$A_0 = \dfrac{977}{e^{(0.05 \cdot 4)}}$	$A_0 = \dfrac{e^{(0.05 \cdot 4)}}{977}$

4 Rearrange this equation to solve for the starting population given this model of a continuous growth of a rabbit population?

$$484 = P_0 \cdot e^{(0.08 \cdot 6)}$$

A		B	
$P_0 = \dfrac{e^{(0.08 \cdot 6)}}{484}$		$P_0 = \dfrac{484}{e^{(0.08 \cdot 6)}}$	
C			
$P_0 = \dfrac{484}{e^{\left(\frac{0.08}{6}\right)}}$			

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5 Rearrange this equation to solve for the starting debt given this model of a growth of debt on a credit card with continuous compounding?

$$963 = D_0 \cdot e^{(0.04 \cdot 8)}$$

A		B	
$D_0 = \dfrac{963}{e^{(0.04 \cdot 8)}}$		$D_0 = \dfrac{963}{e^{\left(\frac{0.04}{8}\right)}}$	
C			
$D_0 = \dfrac{e^{(0.04 \cdot 8)}}{963}$			

6 Rearrange this equation to solve for the starting population given this model of a continuous growth of a rabbit population?

$$986 = P_0 \cdot e^{(0.07 \cdot 3)}$$

A		B	
$P_0 = \dfrac{e^{(0.07 \cdot 3)}}{986}$		$P_0 = \dfrac{986}{e^{\left(\frac{0.07}{3}\right)}}$	
C			
$P_0 = \dfrac{986}{e^{(0.07 \cdot 3)}}$			

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7 Rearrange this equation to solve for the starting debt given this model of a growth of debt on a credit card with continuous compounding?

$$697 = D_0 \cdot e^{(0.03 \cdot 5)}$$

A		B	
$D_0 = \dfrac{e^{(0.03 \cdot 5)}}{697}$		$D_0 = \dfrac{697}{e^{(0.03 \cdot 5)}}$	
C			
$D_0 = \dfrac{697}{e^{\left(\frac{0.03}{5}\right)}}$			

8 Rearrange this equation to solve for the starting population given this model of a continuous growth of an insect population?

$$598 = P_0 \cdot e^{(0.06 \cdot 3)}$$

A		B	
$P_0 = \dfrac{598}{e^{(0.06 \cdot 3)}}$		$P_0 = \dfrac{e^{(0.06 \cdot 3)}}{598}$	
C			
$P_0 = \dfrac{598}{e^{\left(\frac{0.06}{3}\right)}}$			