Name

# Exponential Function Solution Equation - Decay (Discrete) Equation to Starting Value

**1** Rearrange this equation to solve for the starting concentration given this model of a decline of a toxin concentration (hourly dialysis)?

$$331 = C_0 \cdot (1 - 0.09)^{(2)}$$

| | | | |
|---|---|---|---|
| A | $C_0 = \frac{331}{(1-0.09)^2}$ | B | $C_0 = 331 \cdot (1-0.09)^2$ |
| C | $C_0 = \frac{331}{(1+0.09)^2}$ | | |

**2** Rearrange this equation to solve for the starting cash given this model of a balance of a charitable endowment (daily disbursements)?

$$361 = P_0 \cdot (1 - 0.02)^{(5)}$$

| | | | |
|---|---|---|---|
| A | $P_0 = \frac{361}{(1+0.02)^5}$ | B | $P_0 = 361 \cdot (1-0.02)^5$ |
| C | $P_0 = \frac{361}{(1-0.02)^5}$ | | |

**3** Rearrange this equation to solve for the starting cash given this model of a balance of a charitable endowment (monthly disbursements)?

$$507 = P_0 \cdot (1 - 0.08)^{(2)}$$

| | | | |
|---|---|---|---|
| A | $P_0 = 507 \cdot (1-0.08)^2$ | B | $P_0 = \frac{507}{(1-0.08)^2}$ |
| C | $P_0 = \frac{507}{(1+0.08)^2}$ | | |

**4** Rearrange this equation to solve for the starting population given this model of a decline of a bird population (yearly breeding cycle)?

$$132 = P_0 \cdot (1 - 0.05)^{(8)}$$

| | | | |
|---|---|---|---|
| A | $P_0 = \frac{132}{(1-0.05)^8}$ | B | $P_0 = \frac{132}{(1+0.05)^8}$ |
| C | $P_0 = 132 \cdot (1-0.05)^8$ | | |

**5** Rearrange this equation to solve for the starting concentration given this model of a decline of a toxin concentration (hourly dialysis)?

$$360 = C_0 \cdot (1 - 0.04)^{(8)}$$

| | | | |
|---|---|---|---|
| A | $C_0 = \frac{360}{(1+0.04)^8}$ | B | $C_0 = 360 \cdot (1-0.04)^8$ |
| C | $C_0 = \frac{360}{(1-0.04)^8}$ | | |

**6** Rearrange this equation to solve for the starting concentration given this model of a decline of a toxin concentration (hourly dialysis)?

$$515 = C_0 \cdot (1 - 0.03)^{(5)}$$

| | | | |
|---|---|---|---|
| A | $C_0 = \frac{515}{(1-0.03)^5}$ | B | $C_0 = \frac{515}{(1+0.03)^5}$ |

**7** Rearrange this equation to solve for the starting cash given this model of a balance of a charitable endowment (yearly disbursements)?

$$358 = P_0 \cdot (1 - 0.08)^{(4)}$$

| | |
|---|---|
| A | $P_0 = \frac{358}{(1-0.08)^4}$ |
| B | $P_0 = 358 \cdot (1-0.08)^4$ |

**8** Rearrange this equation to solve for the starting population given this model of a decline of a whale population (yearly breeding cycle)?

$$547 = P_0 \cdot (1 - 0.04)^{(6)}$$

| | | | |
|---|---|---|---|
| A | $P_0 = \frac{547}{(1+0.04)^6}$ | B | $P_0 = \frac{547}{(1-0.04)^6}$ |
| C | $P_0 = 547 \cdot (1-0.04)^6$ | | |