



Exponential Function Solving - Decay (Discrete, Mis-matched Time Units)

Equation to Value at Time

1 What is the value of the final cash given this model of a balance of a charitable endowment (yearly disbursements)?

$$P = 900 \cdot (1 - 0.08)^{\left(\frac{1825}{365}\right)}$$

A $P = 705$

B $P = 593$

C $P = 765$

D $P = 655$

2 What is the value of the final cash given this model of a balance of a charitable endowment (weekly disbursements)?

$$P = 200 \cdot (1 - 0.03)^{\left(\frac{28}{7}\right)}$$

A $P = 135$

B $P = 195$

C $P = 260$

D $P = 177$

3 What is the value of the final cash given this model of a balance of a charitable endowment (yearly disbursements)?

$$P = 600 \cdot (1 - 0.04)^{\left(\frac{108}{12}\right)}$$

A $P = 615$

B $P = 415$

C $P = 570$

D $P = 450$

4 What is the value of the final cash given this model of a balance of a charitable endowment (daily disbursements)?

$$P = 600 \cdot (1 - 0.04)^{(8 \cdot 365)}$$

A $P = 2$ B $P = 0$ C $P = 1$ D $P = 3$

5 What is the value of the final cash given this model of a balance of a charitable endowment (yearly disbursements)?

$$P = 300 \cdot (1 - 0.05)^{\left(\frac{1460}{365}\right)}$$

A $P = 300$

B $P = 335$

C $P = 244$

D $P = 345$

6 What is the value of the final concentration given this model of a decline of a toxin concentration (daily dialysis)?

$$C = 800 \cdot (1 - 0.03)^{\left(\frac{120}{24}\right)}$$

A $C = 686$

B $C = 665$

C $C = 875$

D $C = 840$

7 What is the value of the final cash given this model of a balance of a charitable endowment (daily disbursements)?

$$P = 400 \cdot (1 - 0.08)^{(6 \cdot 7)}$$

A $P = 16$

B $P = 15$

C $P = 12$

D $P = 10$

8 What is the value of the final concentration given this model of a decline of a toxin concentration (daily dialysis)?

$$C = 200 \cdot (1 - 0.03)^{(5 \cdot 7)}$$

A $C = 96$

B $C = 47$

C $C = 52$

D $C = 68$