



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

Equation to Time

1 What is the value of the time given this model of a decline of a toxin concentration (hourly dialysis)?

$$0 = 900 \cdot (1 - 0.08)^{(t \cdot 24)}$$

A $t = 8$ days

B $t = 7$ days

C $t = 4$ days

D $t = 6$ days

2 What is the value of the time given this model of a balance of a charitable endowment (yearly disbursements)?

$$553 = 600 \cdot (1 - 0.02)^{(\frac{t}{12})}$$

A $t = 48$ months

B $t = 44$ months

C $t = 52$ months

D $t = 43$ months

3 What is the value of the time given this model of a decline of a toxin concentration (hourly dialysis)?

$$0 = 400 \cdot (1 - 0.07)^{(t \cdot 24)}$$

A $t = 11$ days

B $t = 7$ days

C $t = 10$ days

D $t = 9$ days

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

$$11 = 300 \cdot (1 - 0.05)^{(t \cdot 7)}$$

A $t = 10$ weeks

B $t = 11$ weeks

C $t = 7$ weeks

D $t = 9$ weeks

5 What is the value of the time given this model of a balance of a charitable endowment (weekly disbursements)?

$$294 = 400 \cdot (1 - 0.05)^{(\frac{t}{7})}$$

A $t = 50$ days

B $t = 48$ days

C $t = 47$ days

D $t = 42$ days

6 What is the value of the time given this model of a balance of a charitable endowment (yearly disbursements)?

$$249 = 400 \cdot (1 - 0.09)^{(\frac{t}{365})}$$

A $t = 1806$ days

B $t = 1825$ days

C $t = 1595$ days

D $t = 1784$ days

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

$$434 = 500 \cdot (1 - 0.02)^{(\frac{t}{24})}$$

A $t = 191$ hours

B $t = 210$ hours

C $t = 168$ hours

D $t = 139$ hours

8 What is the value of the time given this model of a balance of a charitable endowment (daily disbursements)?

$$93 = 300 \cdot (1 - 0.08)^{(t \cdot 7)}$$

A $t = 4$ weeks

B $t = 2$ weeks

C $t = 1$ week

D $t = 3$ weeks