



Exponential Function Solving - Decay (Discrete) Scenario to Starting Value

1

What is the value of the starting population given this scenario?

A whale population starts at a certain size. Each subsequent year it declines by 7%. After 3 years it has decreased to a population of 321 whales.

^A $P_0 = 100$	^B $P_0 = 400$
^C $P_0 = 700$	^D $P_0 = 200$

2

What is the value of the starting cash given this scenario?

A charitable endowment starts with a certain amount of money. Each daily it disburses 3% of its remaining funds. After 4 days its funds have decreased to \$708.

^A $P_0 = 800$	^B $P_0 = 1000$
^C $P_0 = 500$	^D $P_0 = 900$

3

What is the value of the starting population given this scenario?

A whale population starts at a certain size. Each subsequent year it declines by 6%. After 2 years it has decreased to a population of 618 whales.

^A $P_0 = 900$	^B $P_0 = 600$
^C $P_0 = 400$	^D $P_0 = 700$

4

What is the value of the starting population given this scenario?

A whale population starts at a certain size. Each subsequent year it declines by 2%. After 8 years it has decreased to a population of 595 whales.

^A $P_0 = 500$	^B $P_0 = 800$
^C $P_0 = 900$	^D $P_0 = 700$

5

What is the value of the starting cash given this scenario?

A charitable endowment starts with a certain amount of money. Each daily it disburses 8% of its remaining funds. After 6 days its funds have decreased to \$242.

^A $P_0 = 200$	^B $P_0 = 100$
^C $P_0 = 400$	^D $P_0 = 700$

6

What is the value of the starting concentration given this scenario?

A toxin starts at a certain concentration. Each weekly dialysis reduces it by 5%. After 6 weeks it has decreased to a concentration of 147mg/L.

^A $C_0 = 300$	^B $C_0 = 200$
^C $C_0 = 400$	^D $C_0 = 100$

7

What is the value of the starting cash given this scenario?

A charitable endowment starts with a certain amount of money. Each yearly it disburses 4% of its remaining funds. After 2 years its funds have decreased to \$276.

^A $P_0 = 300$	^B $P_0 = 400$
^C $P_0 = 200$	^D $P_0 = 600$

8

What is the value of the starting concentration given this scenario?

A toxin starts at a certain concentration. Each hourly dialysis reduces it by 9%. After 2 hours it has decreased to a concentration of 414mg/L.

^A $C_0 = 700$	^B $C_0 = 800$
^C $C_0 = 500$	^D $C_0 = 400$