Name

Exponential Function Solving - Decay (Continuous) Scenario to Value at Time

1

A radioactive material starts at an isotope concentration of 500ppm. It decays continuously at 7% per day. After 2 days it has decayed to a certain isotope concentration.

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

A $R = 420$	B $R = 434$
C $R = 340$	D $R = 530$

2

A radioactive material starts at an isotope concentration of 300ppm. It decays continuously at 8% per day. After 2 days it has decayed to a certain isotope concentration.

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

A $R = 185$	B $R = 300$
C $R = 255$	D $R = 265$

3

A toxin starts at a concentration of 500mg/L. It declines continuously at 3% per month. After 6 months it has decreased to a certain concentration.

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

A $C = 455$	B $C = 555$
C $C = 600$	D $C = 417$

4

A radioactive material starts at an isotope concentration of 600ppm. It decays continuously at 8% per day. After 9 days it has decayed to a certain isotope concentration.

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

A $R = 230$	B $R = 292$
C $R = 425$	D $R = 235$

5

A bacteria population starts at 200. It declines continuously at 4% per day. After 9 days it has decreased to a certain population.

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

A $P = 95$	B $P = 155$
C $P = 175$	D $P = 139$

6

A radioactive material starts at an isotope concentration of 700ppm. It decays continuously at 8% per hour. After 2 hours it has decayed to a certain isotope concentration.

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

A $R = 740$	B $R = 596$
C $R = 705$	D $R = 555$

7

A bird population starts at 800. It declines continuously at 3% per quarter. After 2 quarters it has decreased to a certain population.

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

A $P = 753$	B $P = 1,110$
C $P = 760$	D $P = 1,085$

8

A whale population starts at 600. It declines continuously at 5% per quarter. After 7 quarters it has decreased to a certain population.

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

A $P = 420$	B $P = 395$
C $P = 422$	D $P = 430$