



Exponential Function Solving - Decay (Continuous) - Equation to Time

1 What is the value of the time given this model of a continuously declining bacteria population?

$$167 = 200 \cdot e^{(-0.06 \cdot t)}$$

A $t = 5$ months

B $t = 2$ months

C $t = 3$ months

D $t = 1$ month

2 What is the value of the time given this model of a continuous decline of a bird population?

$$435 = 600 \cdot e^{(-0.04 \cdot t)}$$

A $t = 8$ years

B $t = 6$ years

C $t = 7$ years

D $t = 9$ years

3 What is the value of the time given this model of a continuously declining bacteria population?

$$174 = 300 \cdot e^{(-0.06 \cdot t)}$$

A $t = 11$ years

B $t = 9$ years

C $t = 8$ years

D $t = 10$ years

4 What is the value of the time given this model of a continuously declining bacteria population?

$$285 = 500 \cdot e^{(-0.08 \cdot t)}$$

A $t = 7$ years

B $t = 9$ years

C $t = 8$ years

D $t = 6$ years

5 What is the value of the time given this model of a continuous decline of a bird population?

$$565 = 600 \cdot e^{(-0.02 \cdot t)}$$

A $t = 1$ quarter

B $t = 5$ quarters

C $t = 3$ quarters

D $t = 2$ quarters

6 What is the value of the time given this model of a continuous decline of a whale population?

$$654 = 800 \cdot e^{(-0.05 \cdot t)}$$

A $t = 4$ years

B $t = 3$ years

C $t = 5$ years

D $t = 2$ years

7 What is the value of the time given this model of a continuously declining bacteria population?

$$443 = 500 \cdot e^{(-0.06 \cdot t)}$$

A $t = 3$ weeks

B $t = 2$ weeks

C $t = 4$ weeks

D $t = 1$ week

8 What is the value of the time given this model of a continuous decline of a whale population?

$$584 = 700 \cdot e^{(-0.03 \cdot t)}$$

A $t = 7$ quarters

B $t = 8$ quarters

C $t = 5$ quarters

D $t = 6$ quarters