



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

1 What is the value of the time given this model of a growth of debt on a credit card with continuous compounding?

$$1,016 = 800 \cdot e^{(0.06 \cdot t)}$$

A $t = 5$ months

B $t = 6$ months

C $t = 4$ months

D $t = 3$ months

2 What is the value of the time given this model of a continuous growth of a bacteria population?

$$350 = 200 \cdot e^{(0.07 \cdot t)}$$

A $t = 9$ months

B $t = 6$ months

C $t = 7$ months

D $t = 8$ months

3 What is the value of the time given this model of a continuous growth of an insect population?

$$563 = 300 \cdot e^{(0.09 \cdot t)}$$

A $t = 7$ months

B $t = 6$ months

C $t = 9$ months

D $t = 8$ months

4 What is the value of the time given this model of a continuous growth of a rabbit population?

$$1,003 = 700 \cdot e^{(0.09 \cdot t)}$$

A $t = 5$ quarters

B $t = 3$ quarters

C $t = 4$ quarters

D $t = 6$ quarters

5 What is the value of the time given this model of a growth of debt on a credit card with continuous compounding?

$$785 = 600 \cdot e^{(0.09 \cdot t)}$$

A $t = 3$ months

B $t = 5$ months

C $t = 4$ months

D $t = 2$ months

6 What is the value of the time given this model of a continuously compounding growth of a share price?

$$858 = 500 \cdot e^{(0.09 \cdot t)}$$

A $t = 6$ years

B $t = 5$ years

C $t = 7$ years

D $t = 4$ years

7 What is the value of the time given this model of a continuously compounding growth of money in a savings account?

$$1,342 = 900 \cdot e^{(0.05 \cdot t)}$$

A $t = 9$ quarters

B $t = 7$ quarters

C $t = 8$ quarters

D $t = 10$ quarters

8 What is the value of the time given this model of a continuously compounding growth of app downloads?

$$359 = 300 \cdot e^{(0.02 \cdot t)}$$

A $t = 10$ months

B $t = 7$ months

C $t = 8$ months

D $t = 9$ months