



Exponential Function Solving - Growth (Discrete, Mis-matched Time Units) - Equation to Time

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

$$750 = 500 \cdot (1 + 0.07)^{(t \cdot 3)}$$

A $t = 2$ quarters

B $t = 4$ quarters

C $t = 1$ quarter

D $t = 3$ quarters

2 What is the value of the time given this model of a growth in credit card debt with monthly interest?

$$2,411 = 500 \cdot (1 + 0.06)^{(t \cdot 3)}$$

A $t = 9$ quarters

B $t = 11$ quarters

C $t = 7$ quarters

D $t = 8$ quarters

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

$$938 = 700 \cdot (1 + 0.05)^{(t \cdot 3)}$$

A $t = 1$ quarter

B $t = 3$ quarters

C $t = 2$ quarters

D $t = 4$ quarters

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

$$1,138 = 900 \cdot (1 + 0.04)^{(\frac{t}{3})}$$

A $t = 17$ months

B $t = 19$ months

C $t = 20$ months

D $t = 18$ months

5 What is the value of the time given this model of a growth in credit card debt with yearly interest?

$$293 = 200 \cdot (1 + 0.08)^{(\frac{t}{12})}$$

A $t = 68$ months

B $t = 53$ months

C $t = 63$ months

D $t = 60$ months

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

$$3,804 = 600 \cdot (1 + 0.08)^{(t \cdot 12)}$$

A $t = 2$ years

B $t = 1$ year

C $t = 3$ years

D $t = 4$ years

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

$$1,126 = 500 \cdot (1 + 0.07)^{(t \cdot 4)}$$

A $t = 1$ year

B $t = 5$ years

C $t = 3$ years

D $t = 2$ years

8 What is the value of the time given this model of a growth in credit card debt with quarterly interest?

$$2,317 = 900 \cdot (1 + 0.03)^{(t \cdot 4)}$$

A $t = 6$ years

B $t = 7$ years

C $t = 8$ years

D $t = 9$ years