



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

Equation to Value at Time

1 What is the value of the final cash given this model of a quarterly compounding growth of money in a savings account?

$$P = 200 \cdot (1 + 0.04)^{\left(\frac{18}{3}\right)}$$

A $P = 210$

B $P = 190$

C $P = 270$

D $P = 253$

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

$$D = 400 \cdot (1 + 0.07)^{(8 \cdot 3)}$$

A $D = 1,350$

B $D = 2,420$

C $D = 1,820$

D $D = 2,028$

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

$$D = 700 \cdot (1 + 0.06)^{\left(\frac{24}{3}\right)}$$

A $D = 1,220$

B $D = 1,115$

C $D = 920$

D $D = 1,290$

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

$$D = 500 \cdot (1 + 0.06)^{(4 \cdot 12)}$$

A $D = 11,220$

B $D = 5,280$

C $D = 7,440$

D $D = 8,196$

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

$$D = 600 \cdot (1 + 0.08)^{\left(\frac{24}{12}\right)}$$

A $D = 580$

B $D = 940$

C $D = 470$

D $D = 699$

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

$$D = 200 \cdot (1 + 0.04)^{\left(\frac{60}{12}\right)}$$

A $D = 243$

B $D = 355$

C $D = 285$

D $D = 275$

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

$$D = 300 \cdot (1 + 0.09)^{(4 \cdot 4)}$$

A $D = 1,780$

B $D = 1,730$

C $D = 850$

D $D = 1,191$

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

$$D = 900 \cdot (1 + 0.06)^{\left(\frac{16}{4}\right)}$$

A $D = 1,420$

B $D = 1,136$

C $D = 1,000$

D $D = 830$