

**Determine present value of an investment****1**

What is the final population in this equation for a growth of a rabbit population (yearly breeding cycle)?

$$1,322 = 900 \cdot (1 + 0.08)^{(5)}$$

A $P = 900$

B $P = 1,322$

C $P = 5$

2

A rabbit population starts at 500. Each subsequent yearly breeding season it grows by 7%. After 6 years it has increased to a certain population.

A $P = 975$

B $P = 840$

C $P = 750$

D $P = 460$

3

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

$$1,329 = D_0 \cdot (1 + 0.05)^{(8)}$$

A $D_0 = 900$

B $D_0 = 700$

C $D_0 = 800$

D $D_0 = 1000$

4

A rabbit population starts at a certain size. Each subsequent yearly breeding season it grows by 3%. After 6 years it has increased to a population of 477 rabbits.

A
$$P_0 = \frac{477}{(1 + 0.03)^6}$$

B
$$P_0 = \frac{477}{(1 - 0.03)^6}$$

C
$$P_0 = 477 \cdot (1 + 0.03)^6$$

5

A credit card starts with a certain amount of debt. Each subsequent quarter it grows by 5% in interest. After 2 quarters the debt has grown to \$330.

A $D_0 = 200$

B $D_0 = 300$

C $D_0 = 400$

D $D_0 = 500$

6

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

$$1,030 = P_0 \cdot (1 + 0.07)^{(2 \cdot 4)}$$

A $P_0 = 900$

B $P_0 = 600$

C $P_0 = 800$

D $P_0 = 300$

**Determine present value of an investment****7**

A credit card starts with a certain amount of debt. Each subsequent month it grows by 3% in interest. After 7 years the debt has grown to \$4,790.

A $D_0 = 500$

B $D_0 = 400$

C $D_0 = 700$

D $D_0 = 100$

8

What does this term represent in a model of monthly compounding growth of money in a savings account?

$$P = P_0 \cdot (1 + r)^t$$
$$P = ?$$

A $P = \text{time}$

B $P = \text{final cash}$

C $P = \text{starting cash}$

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In this model of yearly compounding growth of money in a savings account, which term represents the starting cash?

$$P = P_0 \cdot (1 + r)^t$$

starting cash = ?

A F

B r

C P_0

10

Which scenario describes this equation?

$$6,829 = 5900 \cdot (1 + 0.05)^{(3)}$$

A A savings account starts with \$5900. Each subsequent quarter it earns 5% in interest. After 3 quarters it has \$6,829.

B A savings account starts with \$300. Each subsequent quarter it earns 5% in interest. After 59 quarters it has \$6,829.

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A savings account starts with \$1200. Each subsequent quarter it earns 5% in interest. After 6 quarters it has \$1,608.

A $1,608 = 600 \cdot (1 + 0.05)^{(12)}$

B $1,608 = 500 \cdot (1 + 0.12)^{(6)}$

C $1,608 = 1200 \cdot (1 + 0.05)^{(6)}$

D $1,608 = 1200 \cdot (1 + 0.06)^{(5)}$

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A savings account starts with \$3800. Each subsequent year it earns 4% in interest. After 3 years it has a certain amount of cash.

A $P = 4,220$

B $P = 4,430$

C $P = 3,000$

D $P = 4,274$

13

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

$$P = 1000 \cdot (1 + 0.09)^{(2)}$$

A $P = 990$

B $P = 1,590$

C $P = 1,320$

D $P = 1,188$