



Evaluate long-term financial decisions

- 1** \$80 grows by 20%

A \$96.00

B \$115.20

C \$100.80

D \$76.80

E \$129.60

F \$48.00

- 2** In this model of growth of an insect population that breeds once per year, which term represents the rate?

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

rate = ?

A r

B F

C t

- 3** An insect population starts at 700. Each subsequent yearly breeding season it grows by 6%. After 5 years it has increased to a population of 936.

A $936 = 500 \cdot (1 + 0.06)^{(7)}$

B $936 = 700 \cdot (1 + 0.05)^{(6)}$

C $936 = 700 \cdot (1 + 0.06)^{(5)}$

- 4** In this model of quarterly compounding growth of money in a savings account, which term represents the final cash?

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

final cash = ?

A F

B t

C r

- 5** What is the value of the final population given this model of a growth of an insect population that breeds once per year?

$$P = 900 \cdot (1 + 0.05)^{(7)}$$

A $P = 1,266$

B $P = 1,710$

C $P = 1,030$

D $P = 990$

- 6** A credit card starts with \$600 of debt. Each subsequent quarter it grows by 5% in interest. After 3 years the debt has grown to a certain amount.

A $D = 870$

B $D = 1,360$

C $D = 880$

D $D = 1,077$

**Evaluate long-term financial decisions****7**

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

$$D_0 = 800$$

C

$$D_0 = 1000$$

D

$$D_0 = 700$$

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A savings account starts with \$3600. Each subsequent year it earns 4% in interest. After 9 years it has \$5,123.

A

$$5,123 = 900 \cdot (1 + 0.04)^{(36)}$$

B

$$5,123 = 3600 \cdot (1 + 0.04)^{(9)}$$

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A savings account starts with a certain amount of cash. Each subsequent year it earns 3% in interest. After 7 years it has \$3,566.

A

$$P_0 = 3000$$

B

$$P_0 = 2700$$

C

$$P_0 = 3100$$

D

$$P_0 = 2900$$

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

$$P = 5400 \cdot (1 + 0.08)^{(3)}$$

A

$$P = 7,700$$

B

$$P = 7,500$$

C

$$P = 6,802$$

D

$$P = 4,200$$

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A savings account starts with \$3200. Each subsequent quarter it earns 7% in interest. After 6 quarters it has a certain amount of cash.

A

$$P = 5,100$$

B

$$P = 6,500$$

C

$$P = 5,750$$

D

$$P = 4,802$$