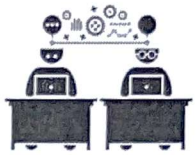
Name: Answers! Class:


Communication


Successful Partnership


Encouragement


Solving Problem Together


Collaboration

Question 01

Bank A pays interest at a rate of 0.45% compounded monthly. Which expression represents the value of a $7,000 deposit after 2 years?

(a)

$$7000\left(1+\frac{0.0045}{12}\right)^{2}$$

(b)

$$7000\left(1+\frac{0.0045}{12}\right)^{24}$$

(c)

$$7000\left(\frac{0.0045}{12}\right)^{24}$$

How much would you have in your account after 2 years?

$7,063.27

How much would you have if you instead invested the $7,000 in a stock that increased in value at a rate of 10% for those 2 years?

$7000(1+0.1)^2 = \$8,470.00$

Question 02

Bank B pays interest at a rate of 0.8% compounded monthly. Which expression represents the value of a \$4,000 deposit after x years?

(a) $4000\left(1+\frac{0.008}{12}\right)^{x}$

(b) $4000\left(1+\frac{0.008}{12}\right)^{12x}$

(c) $4000\left(\frac{0.008}{x}\right)^{12}$

Question 03

Bank C pays interest at a rate of 0.99% compounded monthly.

Stock D increases in value by 9.25% each year.

You are deciding whether to put \$50,000 in either Bank C or Stock D.

You plan not to touch the money for 50 years.

How much more would you have if you make the correct choice?

Bank C → $50{,}000\left(1+\frac{0.0099}{12}\right)^{12\times 50}$

\$82,008

Stock D → $50{,}000(1+0.0925)^{50}$

\$4,169,100

Difference: \$4169100 − \$82008 = \$4,087,092