The answer to the question is highlighted in red. Explanations are highlighted in green.

14. Eight years ago Steve received a fairly large amount of money from his relatives when he graduated from college. At that time, he invested all the money in a mutual fund. Today, when he looked at the statement he just received from the mutual fund company, he noticed that his investment has a value that is four times greater than the amount he originally invested. If the only investment in the mutual fund was the graduation money Steve invested eight years ago, what is the average rate of return that he has earned on his investment?

a. approximately 9%

b. approximately 19%

c. 32%

d. This question cannot be answered without knowing the dollar amount that was invested by Steve.

e. None of the above is a correct answer.

Numerical Solution: It doesn’t matter how much Steve invested, because it has to grow by a multiple of 4—that is, \((1 + r)^8 = 4.0\). As a result,

\[
(1 + r) = \left(4.0\right)^{\frac{1}{8}} = \left(4.0\right)^{0.125}
\]

\[
r = 1.1892 - 1 = .1892 = 18.92%
\]

Financial Calculator Solution: N = 8, PV = -1, PMT = 0, FV = 4, I = ? = 18.92

RETURN TO THE SAMPLE QUESTIONS