

“Answer on question #59536 -Economics - Accounting”

You plan to retire in 40 years and want to have \$10,000,000 on the day you retire. If you plan to invest \$64,615 at the end of each of the next forty years, approximately what rate of return must you earn in order to meet your objective?

Solution

Solving for interest rate in an ordinary annuity

Using the mathematical formula

$$FVn = PMT \left[\frac{(1 + i)^n - 1}{i} \right]$$

$$\$10,000,000 = \$64,615 \{ [(1 + i)^{40} - 1] \div i \}$$

$$\$154,76 = \{ [(1 + i)^{40} - 1] \div i \}$$

The only way to solve for “i” mathematically is by trial and error.

In Excel solve the problem could help the function Goal Seek.

Rate of return equals 0.94%

Answer

The rate of return equals 0.94%.