

Answer on Question #49067 – Economics – Finance

BGE takes out a loan at $j_1 = 0.12$ (=12%) on which BGE makes semiannual payments of \$4500 with the first payment starting six months after taking the loan. If the loan is repaid at the end of ten years, what was the amount of the loan?

Solution

$i = 0.12$, $2 \cdot 10 - 1 = 19$ semiannual payments of \$4500

The amount of the loan can be found according to the formula:

$PV = FV / (1 + i)^n$, where FV - total amount repaid, i - interest rate, n - number of periods.

$$PV = \$4500 \cdot 19 / (1 + 0.12)^{10} = \$27,528.71$$