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QUESTION

1. A company is considering a new investment project. The project has a life of 5 years and requires an initial investment of \$100,000. The project is expected to generate cash flows of \$25,000 per year for the first 3 years and \$30,000 per year for the next 2 years. The company's cost of capital is 10%. Calculate the NPV of the project.

ANSWER

The NPV of the project is calculated as follows:

NPV = $\frac{25,000}{1.10^1} + \frac{25,000}{1.10^2} + \frac{25,000}{1.10^3} + \frac{30,000}{1.10^4} + \frac{30,000}{1.10^5} - 100,000$

NPV = $\frac{25,000}{1.10} + \frac{25,000}{1.21} + \frac{25,000}{1.331} + \frac{30,000}{1.4641} + \frac{30,000}{1.61051} - 100,000$

NPV = $22,727.27 + 20,661.16 + 18,787.87 + 20,490.41 + 18,630.80 - 100,000$

NPV = $80,297.31 - 100,000$

NPV = $-19,702.69$

Therefore, the NPV of the project is $-\$19,702.69$.

The NPV is negative, which indicates that the project is not profitable and should be rejected.

