

Savings and Loans Example

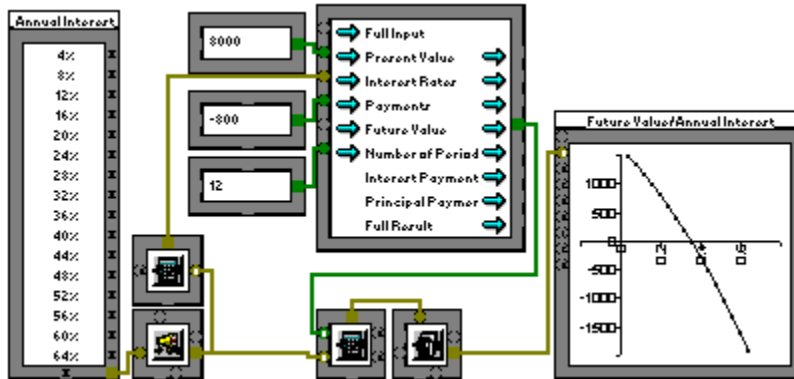
FILE: Sal2.cln

Introduction

This file is an example of using the Future Value calculation of the [Savings and Loans](#) object. Our aim with this is to plot a graph of Future Value against Annual Interest rate, so that you can see how the future value of a loan of £8000 changes as the interest rate changes.

Parameters

Present Value £8000 (Positive since we have borrowed it)
Repayments £-800 (Negative since its money going out)
Number of Periods 12 (We are repaying over 12 months)



Click on any part you need help with.

Conclusions

The line cuts the axis at about 0.35 (i.e. 35%) annual interest rate. This is the maximum we could tolerate before we would fail to pay back the loan over the 12 months.

Simplify

This is a very overblown way of calculating a very simple thing. Layer 1 contains a simpler example where the Future Value is set to zero and the Interest rates are displayed.

Simplify Further

On Layer 2 there is the simplest way of doing this calculation - using the [Rate](#) function in an [Input Table](#). This is a very important point to understand - these examples are about showing you features of CleanSheet, but always remember that for most problems there is a trivial solution.

This is an Input Table object, this table contains the varying interest rates we are going to try.

This is a Calculator Object - used here to convert from annual interest rates to monthly interest rates.

This is an Announcer Object, it announces the rows of the rates table, row-by-row to the next section of the calculation.

This is a Calculator Object. It contains the equation **{b[0],a}** which prepares a coordinate pair {X,Y} to be plotted on the graph.

b[0] is element zero of the row from the rates table, since the table has only 1 element in each row, b[0] is the **only** element of that row.

a is the result of the Future Value calculation.

{... , ...} the curly brackets group the two parts into a row array.

This is a Reporter Object, it takes the row-by-row results and assembles them into a single array.

This is an Object Input Box, used to input a single data object. In this case the Present Value (£8000).

This is an Object Input Box, used to input a single data object. In this case the Repayments (-£800).

This is an Object Input Box, used to input a single data object. In this case the Number of Periods (12 months).

This is the Savings and Loans object that is used to calculate the Future Value of this loan after the 12 months has passed.

This is an XY Scatter Graph, used here to plot the Future Value (Y Axis) against the Annual Interest Rates (X Axis).

