EMI Calculator

Write a program which will be used to calculate the EMI based on the principle, rate of interest, tenure and the number of installments in a year.

The user should be able to enter following values:

- Principle Amount
- Rate of interest
- Tenure
- Number of installment in a year
- Residual Value

The system should provide following options to the user:

1 1. EMI

- The system should generate calculate the interest rate and return the EMI amount to be paid by the user.
- Use following formula for calculation of the EMI amount :

1

Formula

$$x = \frac{P\left(\frac{i}{t}\right) - \frac{R}{\left(1+\frac{i}{t}\right)^{n}}}{\left(1 - \frac{1}{\left(1+\frac{i}{t}\right)^{n}}\right)}$$

where

1 2. Schedule

The system should generate the schedule for the loan period. The repayment schedule consists of following:

- Installment Number
- Opening Balance
- Interest
- Principle repaid
- Installment
- Closing Balance

3 3. Principle and Interest for the Installment Number entered

The system should calculate and display the principle and the interest rate the user will pay for a particular installment number entered by the user.

Write a code to implement the logic explained above.
The code should take care of following points:

1 Quality of Code

2 Program Design
3 Maintainability of Code
4 Clarity of results