# CarLoan Class Test Cases

## Test Cases for the calculatePaymentInformation () method[[1]](#footnote-1)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Scenario** | **Object State** | | | **Calculations** | **Expected Results** | | |
|  | loan amount | interest rate | monthly payment |  | number of payments | total amount paid | total interest paid |
| 1. Loan amount less than monthly payment | 150 | 5% | 250 | Interest = 150 \* .05 / 12 = .625  Total paid = 150 + .63 = 150.63  total Interest = .63  Number of payments = 1 | 1 | 150.63 | .63 |
| 1. Loan amount equal than monthly payment | 10000 | 2% | 1000 | Interest = 10000 \* .02 / 12 = 16.17  Total paid = 10092.79  total Interest = 92.79  Number of payments = 11 | 11 | 10092.79 | 92.79 |
| 1. Loan amount greater than monthly paymen | 100000 | 6% | 2500 | Interest = 10000 \* .06 / 12 = 50  Total paid = 10126  Total Interest = 126  Number of payments = 5 | 5 | 10126 | 126 |
| 1. Loan amount greater than monthly payment | 10000 | 4% | 250 | Interest = 10000 \* .04 / 12 = 400  Total paid = 10750  Total Interest = 750  Number of payments = 44 | 44 | 10750 | 750 |
| 1. Interest per month is greater than or equal to monthly payment | 100 | 100% | 100 | Error: This loan will never be paid off. |  |  |  |
| 1. Loan amount is an invalid input | -1 | 10% | 100 | Error: This input is invalid please input a number greater than 0. |  |  |  |
| 1. Interest rate is an invalid input | 100 | -1 | 100 | Error: This input is invalid please input a number greater than 0. |  |  |  |
| 1. Monthly payment is an invalid input | 100 | 10% | -1 | Error: This input is invalid please input a number greater than 0. |  |  |  |

1. Add as many test cases as necessary to thoroughly test the method. [↑](#footnote-ref-1)