Explanation of "Rule of 78" for Vehicle Financing Services

Interest for the total loan amount will normally be calculated based on a monthly flat rate for Vehicle Financing Services. The borrower will repay the loan monthly with a fixed amount according to the interest rate, tenor and repayment amount agreed with the Bank. The "Rule of 78" is the method most banks use to break down the principal and interest in the monthly repayment of an instalment loan. Under this rule, the proportion of interest in the monthly instalment decreased over the course of loan period. Based on the "Rule of 78", the monthly interest is calculated as below:

$$= \text{Interest for full term} \times \frac{\text{Remaining loan tenor}}{\text{Total loan tenor (For 12 monthly payments, it will be } 12+11+...+2+1=78)}$$

The total interest portions for different loan tenors are illustrated as below:

If a loan is to be repaid over 12 months, the total interest will be divided into 78 portions (12 + 11 + 10 + …… + 1 = 78). The proportion of interest for first month is 12/78, for second month is 11/78 and so on until twelfth month. The proportion of interest for the twelfth month is 1/78.

Loan Tenor (months)	Interest Portion
12	78 (12 + 11 + 10 + … + 1)
24	300 (24 + 23 + 22 + … + 1)
36	666 (36 + 35 + 34 + … + 1)
48	1,176 (48 + 47 + 46 + … + 1)
60	1,830 (60 + 59 + 58 + … + 1)

For details, please refer to the below example:

(1) The total interest expenses and monthly instalment: Assume loan amount is HK$60,000 for a tenor of 12 months & interest rate 0.09% per month flat.

Total Interest Expenses	Monthly Instalment Amount
Loan principal X Monthly flat rate X Tenor (months) = HK$60,000 x 0.09% x 12months = HK$648	(Loan principal + Total interest expenses) / Tenor (months) = (HK$60,000 + HK$648) / 12months = HK$5,054

(2) Full set of repayment schedule: (HKD)

Instalment Term	Monthly Instalment Amount	Interest		Principal		Outstanding Balance
1	5,054	648 x 12 / 78 =	99.69	5,054 - 99.69 =	4,954.31	55,045.69
2	5,054	648 x 11 / 78 =	91.38	5,054 - 91.38 =	4,962.62	50,083.07
3	5,054	648 x 10 / 78 =	83.08	5,054 - 83.08 =	4,970.92	45,112.15
4	5,054	648 x 09 / 78 =	74.77	5,054 - 74.77 =	4,979.23	40,132.92
5	5,054	648 x 08 / 78 =	66.46	5,054 - 66.46 =	4,987.54	35,145.38
6	5,054	648 x 07 / 78 =	58.15	5,054 - 58.15 =	4,995.85	30,149.53
7	5,054	648 x 06 / 78 =	49.85	5,054 - 49.85 =	5,004.15	25,145.38
8	5,054	648 x 05 / 78 =	41.54	5,054 - 41.54 =	5,012.46	20,132.92
9	5,054	648 x 04 / 78 =	33.23	5,054 - 33.23 =	5,020.77	15,112.15
10	5,054	648 x 03 / 78 =	24.92	5,054 - 24.92 =	5,029.08	10,083.07
11	5,054	648 x 02 / 78 =	16.62	5,054 - 16.62 =	5,037.38	5,045.69
12	5,054	648 x 01 / 78 =	8.31	5,054 - 8.31 =	5,045.69	0.00
Total			**648.00**		**60,000.00**	

The example above is for reference only and all amounts are rounded to 2 decimal places.

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