## Explanation and example of the Rule of 78 for Instalment Loans

## Explanation

－The＂Rule of 78＂is the method most banks and financial companies 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 payments decreases over the course of the loan period．
－For example，if a loan is to be repaid over 12 months，the total interest will be divided into 78 portions $(12+11+10+\ldots+1=78) .12 / 78$ ths of the interest is allocated as the first month＇s portion of the total interest，11／78ths of the interest is allocated as the second month＇s portion and so on until the twelfth month，at which time $1 / 78$ th of the interest is allocated as that month＇s portion of the total interest．
－The total interest portions for different loan tenors are illustrated as below：

| Loan Tenor（Months） | Interest Portion |
| :--- | :--- |
| 12 | $78(12+11+10+\ldots+1)$ |
| 24 | $300(24+23+22+\ldots+1)$ |
| 36 | $666(36+35+34+\ldots+1)$ |
| 48 | $1,176(48+47+46+\ldots+1)$ |
| 60 | $1,830(60+59+58+\ldots+1)$ |

## Example

－To take another example，a customer borrows HK\＄20，000 for a tenor of 24 months，and an arrangement fee of $1 \%$ p．a．is added to the principal．Thus，the total loan principal is HK\＄20，400．
－Based on an interest rate of $0.255 \%$ per month flat，the total interest will be：

$$
\begin{aligned}
- \text { Total Interest } & =\text { Loan principal } \times \text { monthly flat rate } \times \text { tenor (months) } \\
& =H K \$ 20,400 \times 0.255 \% \times 24 \\
& =\text { HK } \$ 1,248.48^{*}
\end{aligned}
$$

－According to＂Rule of 78 ＂，the denominator of the loan with a 24 －month tenor is the sum of the numbers 1 to 24 added together，which is $300(24+23+22+\ldots \ldots+1=300)$ ． Hence， $24 / 300$ ths of the total interest is allocated as the portion to be paid in the $1^{\text {st }}$ month．
－ Interest in each instalment $=$ Total interest x interest portion
－Interest of the $1^{\text {st }}$ instalment $=\mathrm{HK} \$ 1,248.48 \times 24 / 300=\mathrm{HK} \$ 99.88^{*}$
－Interest of the $2^{\text {nd }}$ instalment $=\mathrm{HK} \$ 1,248.48 \times 23 / 300=\mathrm{HK} \$ 95.72^{*}$
－Interest of the $3^{\text {rd }}$ instalment $=$ HK $\$ 1,248.48 \times 22 / 300=$ HK\＄91．56＊
－Interest of the last instalment $=\mathrm{HK} \$ 1,248.48 \times 1 / 300=\mathrm{HK} \$ 4.16^{*}$
＊rounded to 2 decimal places
－Detailed breakdown of the principal and interest in each monthly repayment

| Tenor（months）： | 24 |
| :--- | :--- |
| Interest Rate（per month flat）： | $0.255 \%$ |
| Total Loan Amount（HK\＄）： | 20,400 |
| Monthly Repayment Amount（HK\＄）： | 902.10 |


| Instalment | Payment Amount <br> No． | Principal（HK\＄） | Interest（HK\＄） |
| :--- | :--- | :--- | :--- |
| 1 | 902.10 | 802.22 | 99.88 |
| 2 | 902.10 | 806.38 | 95.72 |
| 3 | 902.10 | 810.54 | 91.56 |
| 4 | 902.10 | 814.71 | 87.39 |
| 5 | 902.10 | 818.87 | 83.23 |
| 6 | 902.10 | 823.03 | 79.07 |
| 7 | 902.10 | 827.19 | 74.91 |
| 8 | 902.10 | 831.35 | 70.75 |
| 9 | 902.10 | 835.51 | 66.59 |
| 10 | 902.10 | 839.68 | 62.42 |
| 11 | 902.10 | 843.84 | 58.26 |
| 12 | 902.10 | 848.00 | 54.10 |
| 13 | 902.10 | 852.16 | 49.94 |
| 14 | 902.10 | 856.32 | 45.78 |
| 15 | 902.10 | 860.48 | 41.62 |
| 16 | 902.10 | 864.65 | 37.45 |
| 17 | 902.10 | 868.81 | 33.29 |
| 18 | 902.10 | 872.97 | 29.13 |
| 19 | 902.10 | 877.13 | 24.97 |
| 20 | 902.10 | 881.29 | 20.81 |
| 21 | 902.10 | 885.45 | 16.65 |
| 22 | 902.10 | 889.62 | 12.48 |
| 23 | 902.10 | 893.78 | 8.32 |
| 24 | 900.18 | 896.02 | 4.16 |
| Total | $21,648.48$ | $20,400.00$ | $1,248.48$ |

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

For enquiries，please call our Consumer Finance Services Hotline on 22111211.

