## Amortization Worksheet



This worksheet allows you to see a complete loan Amortization Schedule of the current values entered in the TVM worksheet. The calculation allows to obtain the amount of the payment applied toward principal and toward interest from a single loan payment or from several payments at once.

| Amortization Menu Actions |  |
| :---: | :--- |
| [ PV ] | Stores the loan amount or 'Present Value' to be amortized . |
| $[$ / / Y ] | Stores the nominal interest rate per year in \%. |
| $[$ PMT ] | Stores periodic payment of the loan. |
| $[$ P1 ] | Stores the starting payment to be amortized . |
| $[$ P2 ] | Stores the ending payment to be amortized (recalculates \#P). |
| $[$ \#P ] | Stores the number of periods to amortize at once (recalculates P2) |
| $[$ Table ] ] | Calculates the Previous or the Next P1 to P2 periods amortization. |
| $[$ Balance ] | Calculates the loan "Balance" after the payments are made. |
| $[$ Principal ] | Calculates the amount of the payment applied to "Principal". |
| $[$ Interest ] | Calculates the amount of the payment applied to "Interest". |

## Example 1: Amortization Schedule

You can obtain a 30 -year, $\$ 65,000$ mortgage at $12.5 \%$ annual interest. This requires a monthly payment of $\$ 693.72$ (at the end of each month). Find the amounts that would be applied to interest and to the principal from the first and second year's payments.

Solution: Follow the next sequence:

| Keystrokes | Description |
| :---: | :---: |
| [ TVM ] | Open the Time-Value of Money worksheet. |
| [ END] | Set the END payment mode. |
| 12 [ P/Y ] | Set the number of payments per year to 12. |
| 12.5 [ I/ Y ] | Stores the nominal annual interest rate in percent. |
| 65000 [ PV ] | Stores the loan amount (Present Value). |
| -693.72 [ PMT] | Stores the periodic payment with negative sign. |
| [ AMORT] | Shows the Amortization worksheet |
| 1[P1] | Set the starting period to amortize. |
| 12[P2] or [\#P] | Set the ending period to amortize. |
| [ Balance ] | Shows the remaining loan amount at the end of the 1st year: $\text { BAL }=64,788.52$ |
| [ Principal ] | Shows the amount of the payments of the 1st year that was applied to principal: $\operatorname{PRIN}=\mathbf{- 2 1 1 . 4 8}$ |
| [ Interest ] | Shows the amount of the payments of the 1st year that was applied to interest: $\operatorname{INT}=\mathbf{- 8 , 1 1 3 . 1 6}$ |
| [ ${ }^{\text {d }}$ | Advance to the next amortization: Payments 13-24 |
| [ Balance ] | Shows the remaining loan amount at the end of the 2nd year: $\text { BAL }=64,549.03$ |
| [ Principal ] | Shows the amount of the payments of the 2nd year that was applied to principal: PRIN $=\mathbf{- 2 3 9 . 4 9}$ |
| [ Interest ] | Shows the amount of the payments of the 2nd year that was applied to interest: $\operatorname{INT}=\mathbf{- 8 , 0 8 5 . 1 5}$ |

## Example 2: Amortization Schedule

In the previous example, you found a better alternative with an Interest rate of $10 \%$ per year. Find the new amounts that would be applied to interest and to the principal from the first and second year's payments.

Solution: Follow the next sequence:

| Keystrokes | Description |
| :---: | :---: |
| 10 [ / Y ] | Stores the new interest rate percent. |
| 1 [ P1] | Set the starting period to amortize. |
| 12 [ P2] | Set the ending period to amortize. |
| [ Balance ] | Shows the remaining loan amount at the end of the 1st year: BAL = 63,089.34 |
| [ Principal ] | Shows the amount of the payments of the 1st year that was applied to principal: PRIN =-1,910.66 |
| [ Interest ] | Shows the amount of the payments of the 1st year that was applied to interest: INT = -6,413.98 |
| [ ${ }^{\text {P }}$ ] | Advance to the next amortization: Payments 13-24 |
| [ Balance ] | Shows the remaining loan amount at the end of the 2nd year: BAL = 60,978.62 |
| [ Principal ] | Shows the amount of the payments of the 2nd year that was applied to principal: PRIN =-2,110.72 |
| [ Interest ] | Shows the amount of the payments of the 2nd year that was applied to interest: INT = -6,213.92 |

To visualize the complete loan schedule from the first to the last period, touch the [ Table ] button. Additionally, in the table view you can touch the [ Copy ] button to copy the complete schedule as text, to allow you to paste it in any other application for further use (for example in a email message).

| Amortization Schedule |  |  |  |
| :---: | :---: | :---: | :---: |
| $\#$ | Interest | Principal | Balance |
| $1-12$ | $-6,413.98$ | $-1,910.66$ | $63,089.34$ |
| $13-24$ | $-6,213.92$ | $-2,110.72$ | $60,978.62$ |
| $25-36$ | $-5,992.92$ | $-2,331.72$ | $58,646.90$ |
| $37-48$ | $-5,748.76$ | $-2,575.88$ | $56,071.02$ |
| $49-60$ | $-5,479.01$ | $-2,845.63$ | $53,225.39$ |
| $61-72$ | $-5,181.04$ | $-3,143.60$ | $50,081.79$ |
| $73-84$ | $-4,851.88$ | $-3,472.76$ | $46,609.03$ |
| $85-96$ | $-4,488.22$ | $-3,836.42$ | $42,772.61$ |
| $97-108$ | $-4,086.50$ | $-4,238.14$ | $38,534.47$ |
| $109-120$ | $-3,642.71$ | $-4,681.93$ | $33,852.54$ |
| $121-132$ | $-3,152.45$ | $-5,172.19$ | $28,680.35$ |
| $133-144$ | $-2,610.87$ | $-5,713.77$ | $22,966.58$ |
| $145-156$ | $-2,012.54$ | $-6,312.10$ | $16,654.48$ |
| $157-168$ | $-1,351.61$ | $-6,973.03$ | $9,681.45$ |
| $169-180$ | -621.43 | $-7,703.21$ | $1,978.24$ |
| $181-192$ | -32.48 | $-1,978.24$ | 0.00 |
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