Excel CheatSheet
Complex Loan calculator

Description

A concise guide to the construction and workings of a Microsoft Excel workbook that features a complex loan calculator allowing for multiple repayment layers.

Downloads

- **Spreadsheet**: https://createmanage.files.wordpress.com/2019/09/complex-loan-payment-calculator.xlsx
- **CheatSheet**: https://createmanage.files.wordpress.com/2019/09/complex-loan-payment-calculator-cheatsheet-v1.pdf

Overview

Input Panel

Input Panel key

Column key

The Workings

Values

Loan Details

A Annual interest rate D2 **Range name**: InterestRate	Set this value to your loan interest rate, as a percentage	

B Loan term (years) D3 **Range name:** LoanTerm	Set this value to your loan term, in years, as a decimal	

D Loan amount D5 **Range name:** LoanAmount	Set this value to your loan amount	

E Monthly Fees D6 **Range name:** MonthlyFees	Set this value to the total of your monthly bank fees	

F Payment frequency D7 **Range name:** PaymentFrequency	Select weekly, fortnightly or monthly according to your payment cycle	

G Loan Start H2 **Range name:** LoanStart	Set this value to the date that your loan payments start	

I Actual Payment I4 **Range name:** ActualPayment	Enter a repayment amount to override the scheduled payment amount set by the lender. If not adjusting the set amount, leave this blank.	

Formulas

Loan Details

C	Payments per year	This formula checks whether the payment frequency selected in PaymentFrequency is weekly, fortnightly or monthly then calculates accordingly to provide the number of payments each year, as a decimal.
		The Validation values are set in O10:O12 (hidden columns) but are only used to trigger the appropriate IF Statement and only need adjusting should you want to modify different payment cycles.
D4 Range name: PaymentsPerYear		

FORMULA

=IF(PaymentFrequency=FrequencyWeekly,365/7,
    IF(PaymentFrequency=FrequencyFortnightly,365/14,
       IF(PaymentFrequency=FrequencyMonthly,12,0)))0

Extra Payments

H	Loan End	This formula returns a date a number of months after the LoanStart Date.
		That number is set in the second argument of the EDATE function by the formula; LoanTerm x 12.
H3 Range name: LoanEnd		

FORMULA

=EDATE(LoanStart,LoanTerm*12)

I	Extra Payment	This formula deducts the ScheduledPayment from the ActualPayment to produce the ExtraPayment (if ActualPayment is a number).
		It's a roundabout way of going about it, but I feel it's better to enter the actual deposit rather than the extra (displayed alongside).
H4 Range name: ExtraPayment		

FORMULA

=IF(ISNUMBER(ActualPayment),ActualPayment-ScheduledPayment,0)

J	Additional payments	
XX Range name:		

FORMULA

K	Additional payments (mth)	
XX Range name:		

FORMULA

L	Total extra payments	This formula
XX Range name:		

FORMULA

Loan Summary

M	Scheduled payment	This formula
XX Range name:		

FORMULA

Formulas

N	Scheduled no. of payments	This formula
XX	Range name:	

FORMULA

O	Actual no. of payments	This formula
XX	Range name:	

FORMULA

P	Total interest	This formula
XX	Range name:	

FORMULA

Q	Amount saved	This formula
XX	Range name:	

FORMULA

R	Early end date	This formula
XX	Range name:	

FORMULA

Table Columns

1	Date	
XX	Range name:	

FORMULA

2	Period	
XX	Range name:	

FORMULA

3	Scheduled Payment	
XX	Range name:	

FORMULA

4 Scheduled
Extras

XX   Range name:

FORMULA

5 Additional
Extra

XX   Range name:

FORMULA

6 Manual
Extras

XX   Range name:

FORMULA

7 Total
Payment

XX   Range name:

FORMULA

8 Principal

XX   Range name:

FORMULA

9 Interest

XX   Range name:

FORMULA

10 Monthly
Fees

XX   Range name:

FORMULA

11 Balance

XX   Range name:

FORMULA

Symbols and conventions used

Screen actions

	Vertical lines are used to show the flow in a sequence of commands, i.e. [**Alt**] & [**F**]	[**P**], or Click the Office button	New	Installed Templates.
[**F**] ▶ [**P**]	Commands separated by an arrow indicate action sequences; Often when one has a number of choices in a menu or dialog box. i.e. to open the Print dialog via the File menu.
[xx	xx]	Square brackets separated by vertical lines are used where there are a number of choices, i.e. **Office button**	**New**	[**Installed Templates**	**Presentations**].
Themes	Reference to a group on a Ribbon. i.e. **Home tab**	Font	[**B**].
[**Ctrl**]	Square brackets enclosing an item indicate keys.
[**Ctrl**] + [**C**]	Square brackets joined with a plus sign show keys to be pressed and held in sequence, i.e. hold [**Ctrl**] then press [**C**] to copy.

Key Information

▤ Notes: Supplemental and usually focussed

⅊ Tips

△ Warnings and cautionary notes

△ WARNING, seriously!

An Activity Panel like this is often an opportunity for you to practice and cement learning

Code block

| Tooltip | Text with a light grey underline indicates hidden information is available; a hyperlink ToolTip or a popup. |
| Item | Bold, grey text indicates a key element in a set of instructions. |

Create a list of the Range Names

To help with auditing or checking out a workbook, you can list all of the Range Names and their locations. First though – if you're doing it for this workbook - you'll need to go to a safe area in the Extra Payment Calculator worksheet to paste it. Why there? Well, most of the range names are scoped to that worksheet, so doing the sensible thing of pasting the list in a blank worksheet has to wait a bit. So hold [**Ctrl**] then tap [**End**] to go to the furthest point down and right of your spreadsheet. Release the keys, tap [**Home**] to bring the cursor back to the left.

Now that we are safely away from your data, let's get that list!

⅊ From the **Formulas** tab of the ribbon, in the Defined Names group, click the **Use In Formula** tool.

⅊ Choose **Paste Names** from the submenu then click the [**Paste List**] button.

Now, **don't do a thing**! Pause, breathe! *Read on…*

Now let's cut and paste that list to a blank worksheet in case you need to expand your table of data

The list you have just pasted is highlighted. Great! Let's cut and paste it somewhere sensible…

⅊ Hold [**Ctrl**] then tap [**X**] to cut the selection from the worksheet and place it in memory.

⅊ Select a cell in a new worksheet for a place to start the list then hold [**Ctrl**] then tap [**V**] to paste memory to worksheet

Now to pretty it up

⅊ Click on the header of the first column of data, hold and drag right to the next column.

⅊ Now that both columns are selected, release the mouse button and reposition between the columns until the cursor changes to arrowheads, then double-click to auto-adjust the column widths