

Module 7

(Perform Calculations With Functions)

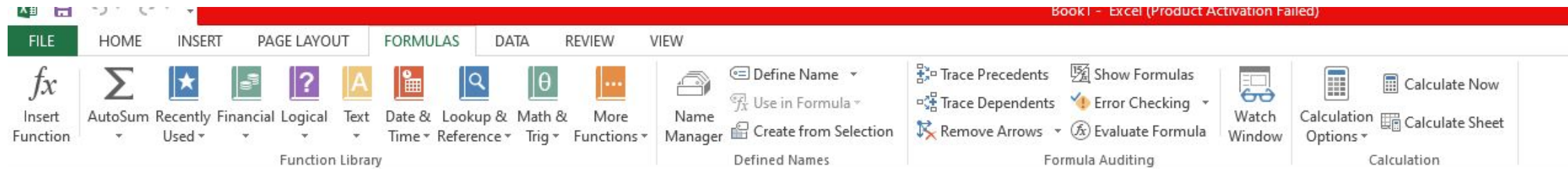


Smart Office

Our eyes will be on

- Simple Formulas
- Own Formulas
- Date and Time Functions
- Financial Functions
- Logical Functions
- Lookup and Reference
- Mathematical Functions
- Statistical Functions
- Text Functions

Simple Formulas & Own Formulas



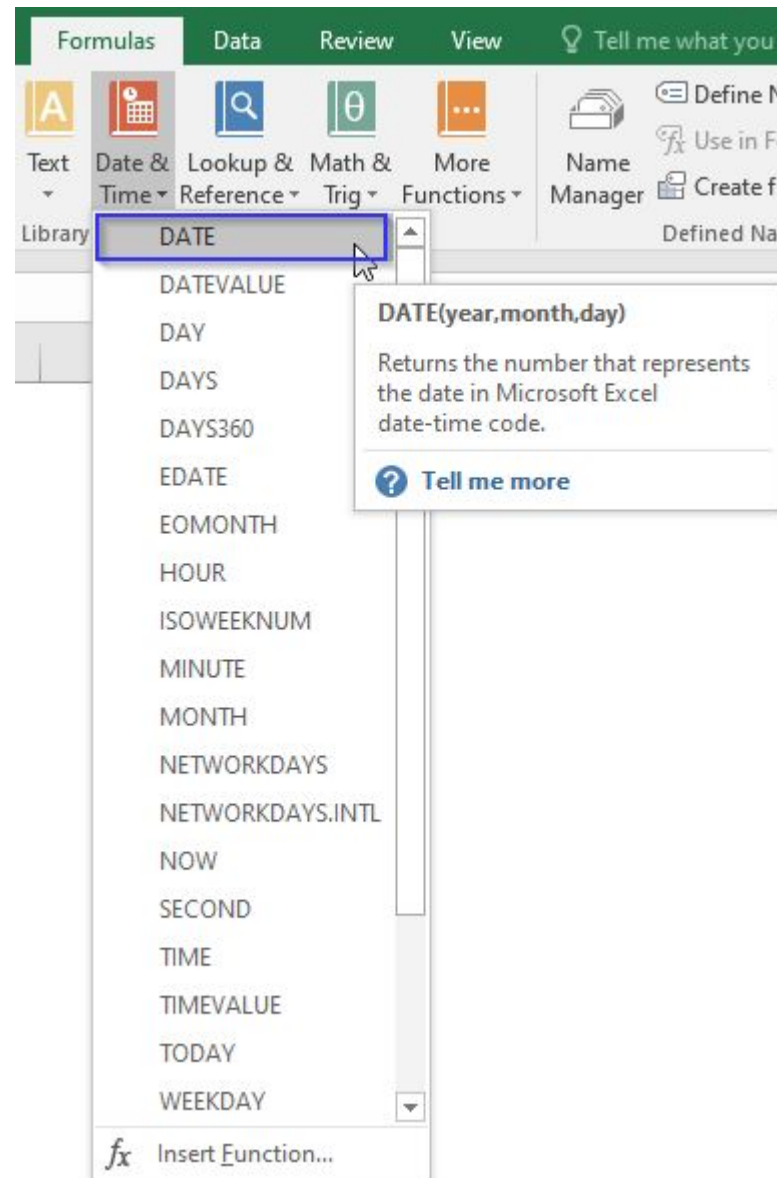
Some simple and frequently used formulas:

- $= \text{num1} + \text{num2}$
- $= \text{num1} - \text{num2}$
- $= \text{num1} * \text{num2}$
- $= \text{num1} / \text{num2}$

And uncountable many more

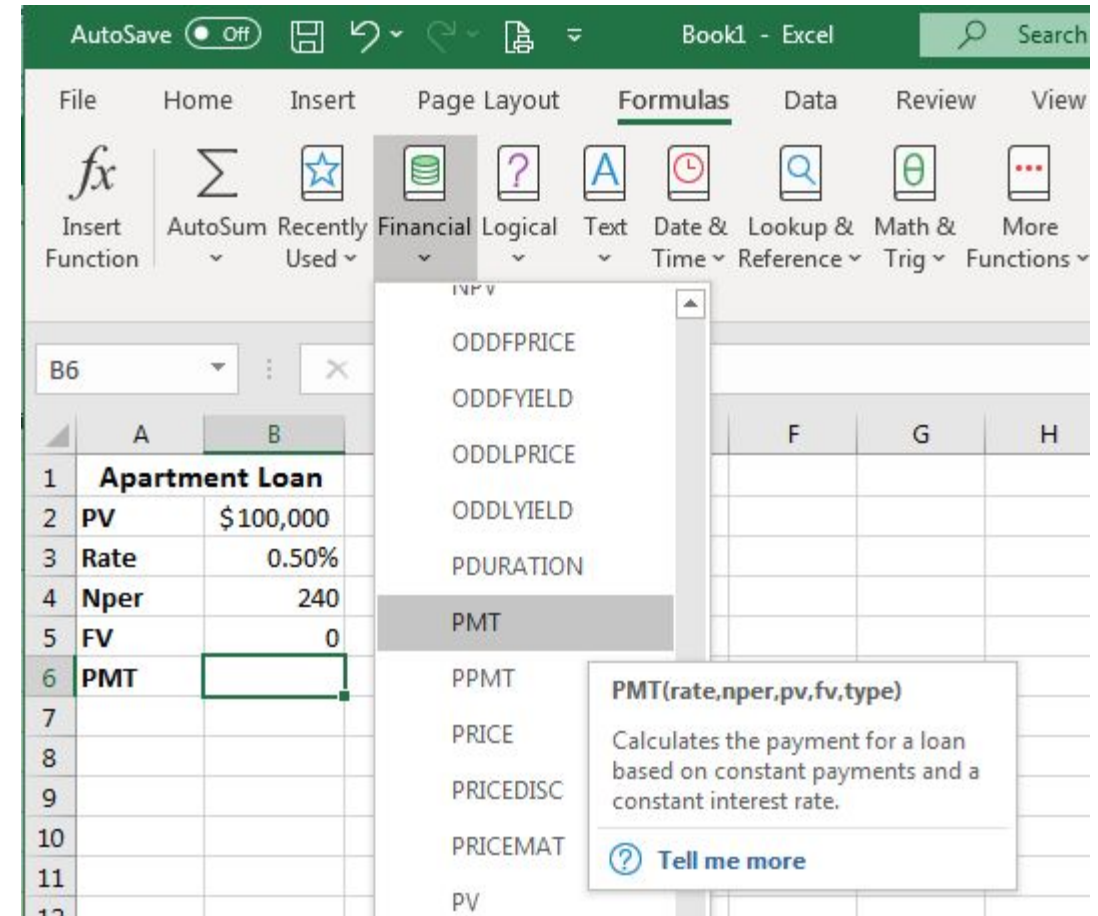
- You can combine multiple built-in formulas to create your own need based formulas

Date and Time Functions



Financial Formulas

- These functions can perform different financial calculations given the parameters



Financial Formulas

How To Use The ACCRINT Function In Excel?

Suppose we purchase a bond from [TreasuryDirect](#) with a face value of \$1,000 with an issue date of 1st January 2022, which settles on 14th February 2022 and has a maturity date of 31st December 2025. The annual interest rate on the bond is equal to 5%, which makes a semi-annual coupon payment.

We want to calculate the accrued interest for the first interest period ending on 30th June 2022.

The data looks as illustrated below:

	A	B	C	D
1				
2		Issue Date	1/1/2022	
3		Settlement Date	2/14/2022	
4		First Coupon Date	6/30/2022	
5		Maturity Date	12/31/2025	
6		Rate	5%	
7		Par Value	\$ 1,000.00	
8		Frequency	2	
9		Basis	0	
10		Calc_method	0	
11				
12		Accrued Interest		
13				

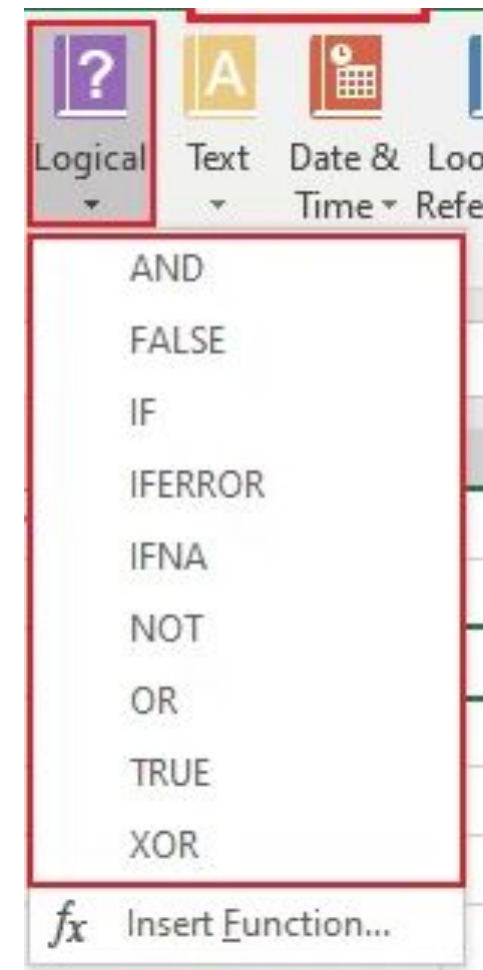
Financial Formulas

We will calculate the accrued interest between the settlement date and the first coupon date. The formula will be `=ACCRINT(C2,C4,C3,C6,C7,2,0,0)`, giving the accrued interest \$5.97.



	A	B	C	D
1				
2		Issue Date	1/1/2022	
3		Settlement Date	2/14/2022	
4		First Coupon Date	6/30/2022	
5		Maturity Date	12/31/2025	
6		Rate	5%	
7		Par Value	\$ 1,000.00	
8		Frequency	2	
9		Basis	0	
10		Calc_method	0	
11				
12		Accrued Interest	\$ 5.97	
13				

Logical Functions

- These functions can perform different logical operations based on the compared values



LOOKUP and Reference

D2		:	  <i>fx</i>	=LOOKUP(4.19, A2:A6, B2:B6)		
	A	B	C	D	E	
1	Frequency	Color		Result		
2	4.14	red		orange		
3	4.19	orange				
4	5.17	yellow				
5	5.77	green				
6	6.39	blue				

Mathematical Formulas

Calculator key	Excel method	Description, example	Result
+ (Plus key)	+ (plus)	Use in a formula to add numbers. Example: =4+6+2	12
- (Minus key)	- (minus)	Use in a formula to subtract numbers or to signify a negative number.	6
		Example: =18-12	-120
		Example: =24*-5 (24 times negative 5)	
x (Multiply key)	* (asterisk; also called "star")	Use in a formula to multiply numbers. Example: =8*3	24
÷ (Divide key)	/ (forward slash)	Use in a formula to divide one number by another. Example: =45/5	9
% (Percent key)	% (percent)	Use in a formula with * to multiply by a percent. Example: =15%*20	3
√ (square root)	SQRT (function)	Use the SQRT function in a formula to find the square root of a number. Example: =SQRT(64)	8
1/x (reciprocal)	=1/n	Use =1/n in a formula, where <i>n</i> is the number you want to divide 1 by. Example: =1/8	0.125

Statistical Functions

Function	Description
AVEDEV function	Returns the average of the absolute deviations of data points from their mean
AVERAGE function	Returns the average of its arguments
AVERAGEA function	Returns the average of its arguments, including numbers, text, and logical values
AVERAGEIF function	Returns the average (arithmetic mean) of all the cells in a range that meet a given criteria
AVERAGEIFS function	Returns the average (arithmetic mean) of all cells that meet multiple criteria

Text Functions

Function	Description
ARRAYTOTEXT function <div>Microsoft 365</div>	Returns an array of text values from any specified range
ASC function	Changes full-width (double-byte) English letters or katakana within a character string to half-width (single-byte) characters
BAHTTEXT function	Converts a number to text, using the ฿ (baht) currency format
CHAR function	Returns the character specified by the code number
CLEAN function	Removes all nonprintable characters from text
CODE function	Returns a numeric code for the first character in a text string
CONCAT function <div>2016</div>	Combines the text from multiple ranges and/or strings, but it doesn't provide the delimiter or IgnoreEmpty arguments.
CONCATENATE function	Joins several text items into one text item

Any Questions

