About using functions to calculate values

Functions are predefined formulas that perform calculations by using specific values, called arguments, in a particular order, or structure. For example, the SUM function adds values or ranges of cells, and the PMT function calculates the loan payments based on an interest rate, the length of the loan, and the principal amount of the loan.

Arguments can be numbers, text, logical values such as TRUE or FALSE, arrays, error values such as #N/A, or cell references. The argument you designate must produce a valid value for that argument. Arguments can also be constants, formulas, or other functions.

The structure of a function begins with the function name, followed by an opening parenthesis, the arguments for the function separated by commas, and a closing parenthesis. If the function starts a formula, type an equal sign (=) before the function name.

**Date and Time**
- NOW() returns serial number of current date and time
- TODAY() returns serial number of current date
- YEAR(serial_number) returns year corresponding to date (serial number)
- MONTH(serial_number) returns month corresponding to date (serial number)
- DAY(serial_number) returns day corresponding to date (serial number)
- HOUR(serial_number) returns hour corresponding to date (serial number)
- MINUTE(serial_number) returns minute corresponding to date (serial number)

**Financial**
- FV(rate,nper,pmt,[pv],[type])
- PMT(rate,nper,pv,[fv],[type])
- PV(rate,nper,pmt,[pv],[type])

Note: type determines when the payment is made
- 0 end of period
- 1 start of period

**Information**
- CELL(info_type,reference) “col”, “content”, “format”, “row”, “width”
- COUNTBLANK(range)
- ISBLANK(value)
- ISERROR(value)
Information (cont.)

ISEVEN(value)
ISNUMBER(value)
ISODD(value)
ISTEXT(value)

Logical

AND(logical1,logical2)
FALSE()
IF(logical,value_if_true,value_if_false)
NOT(logical)
OR(logical1,logical2)
TRUE()

Lookup and Reference

ADDRESS(row_num,column_num,[abs])
COLUMN(reference)
HLOOKUP(lookup_value,range,row_index)
ROW(reference)
VLOOKUP(lookup_value,range,col_index)

Math and Trigonometry

ABS(number)
CEILING(number,significance)
COUNTIF(range,criteria)
EVEN(number)
FLOOR(number,significance)
GCD(number1,number2)
INT(number)
LCM(number1,number2)
MOD(number,divisor)
ODD(number)
PRODUCT(range)
RAND()
ROUND(number,num_digits)
SUM(range)
TRUNC(number)

Statistical

AVERAGE(range)
COMBIN(number,number_chosen)
COUNT(range)
FORECAST(new_x,range_known_y,range_known_x)
Statistical (cont.)
  FREQUENCY(data_range,bins_range)
  GROWTH(range_known_y,range_known_x,new_x)
  MAX(range)
  MEDIAN(range)
  MIN(range)
  MODE(range)
  PERMUT(number,number_chosen)
  SLOPE(range_known_y,range_known_x)
  STDEV(range)

Text
  CONCATENATE(text1,text2)    text1&text2
  FIND(find_text,within_text,start_num)
  LEFT(text,num_char)
  LEN(text)
  LOWER(text)
  MID(text,start_num,num_char)
  PROPER(text)
  RIGHT(text,num_char)
  TRIM(text)
  UPPER(text)