## THE MICROSOFT EXCEL FORMULAS CHEAT SHEET

## DATE AND TIME FORMULAS

$=$ NOW | Show the date and time |
| ---: |


$=$ TODAY () | Show the current date |
| ---: |
| without the time |


$=\operatorname{DAY}(\operatorname{TODAY}()) \quad$| Show today's |
| ---: |
| date in a cell |

## COUNTING AND ROUNDING FORMULAS

| = SUM | Calculates the sum of a group of values | = COUNT | Counts the number of cells in a range that contains numbers |
| :---: | :---: | :---: | :---: |
| = AVERAGE | Calculates the mean of a group of values | = INT | Removes the decimal portion of a number |
| =ROUND | Rounds a number to a specified number of decimal places | $=\mathrm{COUNTA}(\mathrm{Al}: \mathrm{A} 5)$ | Count the number of non-blank cells in a range |
| $=\mathrm{IF}$ | Tests for a true or false condition | $=\operatorname{ROUND}(1.45,1)$ | Rounds 1.45 to one decimal place |
| = NOW | Returns the date, without the time | $=\operatorname{ROUND}(-1.457,2)$ | Rounds -1.457 to two decimal places |
| = AVERAGE | Calculates the mean of a group of values | = TRUE | Returns the logical value TRUE |
| =TODAY | Returns the date, without the time | =FALSE | Returns the logical value FALSE |

## COUNTING AND ROUNDING FORMULAS (CONT.)

\author{
$=$ SUMIF <br> ```
=COUNTIF

```
}

Calculates a sum from a group of values in which a condition has been met

Calculates the sum of a group of values
\[
=A N D
\]

Returns TRUE if all of its arguments are TRUE

Returns TRUE if any argument is TRUE

\section*{UNIT CONVERSION FORMULAS}
```

=CONVERT(Al,"DAY","HR")

```

Converts value of Al from days to hours
= CONVERT(Al,"HR","MN")

Converts value of Al from hours to minutes
= CONVERT(AI,"YR", "DAY")

Converts value of Al from years to days
= CONVERT(Al",MI","KM")

Converts value of Al from miles to kilometers
\[
=\mathrm{CONVERT}(\mathrm{Al}, " K M ", " M 1 ")
\]

Converts value of Al from kilometers to miles
```

=CONVERT(Al,"IN","FT")

```

Converts value of Al from inches to feet
= CONVERT(Al,"C","F")

Converts value of Al from Celsius to Fahrenheit
= CONVERT(AI,"TSP","TBS")

Converts value of Al from teaspoons to tablespoons

> !ERROR! AI does not contain a number or expression

Converts value of Al from gallons to liters
=CONVERT(AI,"CM","IN")

Converts value of Al from centimeters to inches
\[
=\mathrm{BIN} 2 \mathrm{DEC}(1100100)
\]

Converts binary 1100100 to decimal (100)
\[
=\mathrm{ROMAN}
\]

Converts a number into a Roman numeral

\section*{MATHEMATICS FORMULAS}
\begin{tabular}{|c|c|c|c|}
\hline \(=\mathrm{B} 2-\mathrm{C} 9\) & Subtracts values in the two cells & \(=\operatorname{MAX}(\mathrm{C} 27: \mathrm{C} 34)\) & Calculates the largest number in a range \\
\hline \(=\mathrm{D} 8 *\) A3 & Multiplies the numbers in the two cells & \(=\operatorname{SMALL}(\mathrm{Bl}: \mathrm{B7} 7,2)\) & Calculates the second smallest number in a range \\
\hline \(=\mathrm{PRODUCT}(\mathrm{Al}: \mathrm{Al9})\) & Multiplies the cells in the range & \(=\mathrm{LARGE}(\mathrm{Gl3}\) :D7,3) & Calculates the third largest number in a range \\
\hline \(=\) PRODUCT (F6:Al,2) & Multiplies the cells in the range, and mulitplies the result by 2 & \(=\operatorname{POWER}(9,2)\) & Calculates nine squared \\
\hline = Al/ A3 & Divides value in Al by the value in A3 & \(=9 \wedge 3\) & Calculates nine cubed \\
\hline \(=\mathrm{MOD}\) & Returns the remainder from division & \(=\mathrm{FACT}(\mathrm{Al})\) & Factorial of value in Al \\
\hline \(=\operatorname{MIN}(\mathrm{Al}: \mathrm{AB})\) & Calculates the smallest number in a range & =EVEN & Rounds a number up to the nearest even integer \\
\hline \(=\) ODD & Subtracts values in the two cells & =RANDBETWEEN & Calculates the largest number in a range \\
\hline = AVERAGE & Multiplies the numbers in the two cells & \(=\mathrm{COS}\) & Calculates the second smallest number in a range \\
\hline \(=\mathrm{MEDIAN}\) & Multiplies the cells in the range & \(=\) SIN \(\begin{aligned} & \text { Returns the sine of the } \\ & \text { given angle }\end{aligned}\) & Calculates the sine of the given angle \\
\hline = SQRT & Multiplies the cells in the range, and mulitplies the result by 2 & \(=\mathrm{TAN}\) & Calculates the tangent of a number \\
\hline \(=\mathrm{Pl}\) & Divides value in Al by the value in A3 & \(=\) CORREL Calculat & tes the correlation coefficient between two data sets \\
\hline = POWER & Returns the remainder from division & =STDEVA & Estimates standard deviation based on a sample \\
\hline \(=\) RAND & Calculates the smallest number in a range & \(=\mathrm{PROB}\) Retur & the probability that values in range are between two limits \\
\hline
\end{tabular}

\section*{TEXT FORMULAS}
\[
=\mathrm{LEFT}
\]
= RIGHT
\[
=\mathrm{MID}
\]

Extracts one or more characters from the left side of a text string

Extracts one or more characters from the right side of a text string

Extracts characters from the middle of a text string

Merges two or more text strings

Replaces part of a text string

Formats a number and converts it to text

Converts a text cell to a number
\(=\) CONCATENATE
= REPLACE
\[
=\text { TEXT }
\]
\(=\) VALUE

Checks to see if two text
values are identical
= EXACT
=LOWER

Converts a text string to all lowercase
=UPPER
=PROPER

Converts a text string to proper case
\(\left.\left.\begin{array}{rr}=\text { LOWER } & \begin{array}{r}\text { Converts a text string to all } \\ \text { lowercase }\end{array} \\ =\text { UPPER } & \begin{array}{r}\text { Converts a text string to all } \\ \text { uppercase }\end{array} \\ =\text { PROPER } & \begin{array}{r}\text { Returns a text string's } \\ \text { length in characters }\end{array} \\ =\text { Converts a text string to }\end{array}\right\} \begin{array}{r}\text { Repeats text a given } \\ \text { number of times }\end{array}\right\}\)

\section*{FINANCE FORMULAS}


Calculates the interest rate for a fully invested security

Calculates the effective annual interest rate

Calculates the future value of an investment

Calculates the future value of an initial principal after applying a series of compound interest rates

Calculates the total payment
(debt and interest) on a debt security

Calculates the interest
\[
=I P M T
\]
= ACCRINT

Calculates the accrued interest for a security that pays periodic interest
=ACCRINTM
= AMORLINC

Calculates the depreciation for each accounting period
\[
\begin{array}{r}
=\text { NPV Calculates the net present value of cash } \\
\text { flows based on a discount rate }
\end{array}
\]
\(=\mathrm{YIELD}\)
Calculates the yield of a security based on maturity, face value, and interest rate
=PRICE

Calculates the accrued interest for a security that pays interest at maturity

\section*{Calculates the price per \(\$ 100\) face} value of a periodic coupon bond```

