

Cheat Sheet for comprehensive Microsoft Excel Advanced

Data Management and Organization

Sorting and Filtering

- Sort Data:

- **Ascending:** `Alt + A + S + A`
- **Descending:** `Alt + A + S + D`
- **Custom Sort:** `Alt + A + S + S`

- Filter Data:

- **Filter:** `Ctrl + Shift + L`
- **Clear Filter:** `Alt + D + F + F`

Data Validation

- Set Data Validation:

- **Menu:** `Data > Data Validation`
- **Shortcut:** `Alt + D + L`

- Examples:

- **List of Values:** `=List!\$A\$1:\$A\$5`
- **Number Range:** `=AND(A1>=1, A1<=100)`

Tables

- Create Table:

- **Menu:** `Insert > Table`
- **Shortcut:** `Ctrl + T`

- Convert Range to Table: `Ctrl + L`

- Sort Table: `Alt + A + S`

- Filter Table: `Ctrl + Shift + L`

Formulas and Functions

Basic Formulas

- **SUM:** `=SUM(A1:A10)`
- **AVERAGE:** `=AVERAGE(B1:B10)`
- **COUNT:** `=COUNT(C1:C10)`
- **MAX:** `=MAX(D1:D10)`
- **MIN:** `=MIN(E1:E10)`

Logical Functions

- **IF:** `=IF(A1>50, "Pass", "Fail")`
- **AND:** `=AND(A1>50, B1>50)`
- **OR:** `=OR(A1>50, B1>50)`
- **NOT:** `=NOT(A1>50)`

Text Functions

- **CONCATENATE:** `=CONCATENATE(A1, " ", B1)`
- **LEFT:** `=LEFT(A1, 5)`
- **RIGHT:** `=RIGHT(A1, 5)`
- **MID:** `=MID(A1, 2, 3)`
- **LEN:** `=LEN(A1)`

Lookup and Reference Functions

- **VLOOKUP:** `=VLOOKUP(A1, B1:C10, 2, FALSE)`
- **HLOOKUP:** `=HLOOKUP(A1, B1:C10, 2, FALSE)`
- **INDEX:** `=INDEX(A1:C10, 2, 3)`
- **MATCH:** `=MATCH(A1, B1:B10, 0)`

Advanced Formulas and Techniques

Array Formulas

- **Basic Array:** `{=SUM(A1:A10\*B1:B10)}`
- **Conditional Array:** `{=SUM(IF(A1:A10>50, A1:A10, 0))}`

Named Ranges

- **Create Named Range:**
 - **Menu:** `Formulas > Define Name`
 - **Shortcut:** `Ctrl + F3`
- **Use Named Range:** `=SUM(MyRange)`

Data Analysis Tools

- **Solver:**
 - **Menu:** `Data > Solver`
 - **Example:** Optimize budget allocation
- **Goal Seek:**
 - **Menu:** `Data > What-If Analysis > Goal Seek`
 - **Example:** Find target sales to achieve profit

Pivot Tables and Charts

Pivot Tables

- **Create Pivot Table:**
 - **Menu:** `Insert > PivotTable`
 - **Shortcut:** `Alt + N + V`
- **Refresh Pivot Table:** `Alt + F5`
- **Filter Pivot Table:** `Ctrl + Shift + L`

Pivot Charts

- **Create Pivot Chart:**
 - **Menu:** `Insert > PivotChart`
 - **Shortcut:** `Alt + N + C`
- **Change Chart Type:** `Alt + JC + CT`

Macros and VBA

Recording Macros

- **Start Recording:** `Alt + F8`

- **Stop Recording:** `Alt + F11`
- **Run Macro:** `Alt + F8`

VBA Basics

- **Open VBA Editor:** `Alt + F11`
- **Insert Module:** `Alt + I + M`
- **Basic VBA Code:**

```
Sub HelloWorld()  
    MsgBox "Hello, World!"  
End Sub
```

Shortcuts and Productivity Tips

General Shortcuts

- **Save:** `Ctrl + S`
- **Undo:** `Ctrl + Z`
- **Redo:** `Ctrl + Y`
- **Copy:** `Ctrl + C`
- **Paste:** `Ctrl + V`
- **Cut:** `Ctrl + X`
- **Select All:** `Ctrl + A`
- **Find:** `Ctrl + F`
- **Replace:** `Ctrl + H`

Navigation Shortcuts

- **Move to Edge:** `Ctrl + Arrow Key`
- **Move to Next Sheet:** `Ctrl + Page Down`
- **Move to Previous Sheet:** `Ctrl + Page Up`
- **Move to Last Cell:** `Ctrl + End`
- **Move to First Cell:** `Ctrl + Home`

Formatting Shortcuts

- **Bold:** `Ctrl + B`
- **Italic:** `Ctrl + I`
- **Underline:** `Ctrl + U`
- **Align Left:** `Ctrl + L`
- **Align Center:** `Ctrl + E`
- **Align Right:** `Ctrl + R`
- **Increase Font Size:** `Ctrl + Shift + >`
- **Decrease Font Size:** `Ctrl + Shift + <`

Advanced Formatting and Customization

Conditional Formatting

- **Apply Conditional Formatting:**
 - **Menu:** `Home > Conditional Formatting`
 - **Shortcut:** `Alt + H + L`
- **Examples:**
 - **Data Bars:** `Home > Conditional Formatting > Data Bars`
 - **Color Scales:** `Home > Conditional Formatting > Color Scales`

Custom Number Formats

- **Menu:** `Home > Number Format`
- **Examples:**
 - **Currency:** `0.00 [\$€-407]`
 - **Date:** `dd/mm/yyyy`
 - **Percentage:** `0.00%`

Collaboration and Sharing

Sharing Workbooks

- **Share Workbook:**

- **Menu:** `Review > Share Workbook`
- **Shortcut:** `Alt + R + W`
- **Track Changes:** `Alt + R + T`

Comments and Annotations

- **Add Comment:** `Shift + F2`
- **Edit Comment:** `Shift + F2`
- **Delete Comment:** `Alt + H + M + D`

Advanced Data Analysis

Data Analysis ToolPak

- **Activate ToolPak:**
 - **Menu:** `File > Options > Add-Ins > Excel Add-ins > Go`
 - **Tools:** Descriptive Statistics, Regression, etc.

Power Query

- **Load Data:**
 - **Menu:** `Data > Get & Transform Data > From Table/Range`
 - **Transform Data:** `Home > Transform`

Security and Protection

Protect Worksheet

- **Menu:** `Review > Protect Sheet`
- **Shortcut:** `Alt + R + P`

Encrypt Workbook

- **Menu:** `File > Info > Protect Workbook > Encrypt with Password`

Tips and Tricks

Freeze Panes

- **Freeze Top Row:** `Alt + W + F + R`
- **Freeze First Column:** `Alt + W + F + C`
- **Freeze Panes:** `Alt + W + F + F`

Split Windows

- **Split Windows:** `Alt + W + S`
- **Remove Split:** `Alt + W + S`

Zoom and View

- **Zoom In:** `Ctrl + Shift + +`
- **Zoom Out:** `Ctrl + -`
- **Normal View:** `Ctrl + Alt + `

Conclusion

This cheat sheet provides a comprehensive overview of advanced Excel features, shortcuts, and techniques. Mastering these tools will significantly enhance your productivity and data analysis capabilities in Excel.

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