

ITL PUBLIC SCHOOL

Class 5 — Computer Application

REVISION POINTERS

Chapter 4 - Introduction to MS Excel

1. WORKBOOK AND WORKSHEET BASICS

- MS Excel is an electronic spreadsheet program used to store and organise data.
- It is used in accounting, business, education, etc. to perform calculations and generate statistical reports.
- **Workbook:** Excel file that contains a collection of worksheets.
- **Worksheet:** a single Excel sheet made up of rows and columns.
- By default, a new workbook has one worksheet named Sheet1.
- You can move or copy a worksheet to another workbook using the 'Move or Copy' option (right-click the sheet name).

2. ROWS, COLUMNS, CELL AND CELL REFERENCE

- **Rows:** horizontal, identified by numbers (1, 2, 3...) ranging up to 1,048,576.
- **Columns:** vertical, identified by letters (A, B, C...) up to 16,384 columns.
- **Cell:** the box formed where a row and a column meet. It is the basic unit for storing data.
- **Cell Reference:** the column letter followed by the row number used to identify a cell, e.g. C9.

3. ACTIVE CELL, NAME BOX AND FORMULA BAR

- **Active Cell:** the cell currently selected on the worksheet, shown with a thick black border (cell pointer).
- **Name Box:** located above the column heading on the left; it shows the location of the cell pointer.
- **Formula Bar:** located to the right of the Name Box; it shows the numbers, text and formulas entered in the active cell.

4. ENTERING DATA AND TYPES OF DATA

- Entering data is a 3-step process: (1) Click on the cell, (2) Type the data, (3) Press Enter or click another cell.
- There are three types of data you can enter in a worksheet: Numbers, Text and Formula.
- Numbers are right-aligned in a cell by default; Text is left-aligned by default.
- A picture is NOT a type of data entered directly into a cell.

5. SELECTING CELLS, INSERTING/DELETING ROWS & COLUMNS, AUTOFILL

A. Selecting Cells

- To select an entire row or column, click on its row/column heading.
- To select non-adjacent cells, hold down the Ctrl key while clicking each cell/range.
- To select adjacent rows/columns, hold down Shift while selecting the first and last row/column.

B. Inserting & Deleting Rows/Columns

- To insert a row or column: right-click on a row/column heading → click 'Insert'.
- To delete a row or column: right-click on it → click 'Delete'.

C. Autofill Feature

- Autofill helps you quickly fill numbers, dates or days of the week without typing them all.

- Click and drag the fill handle (small square at the bottom-right corner of a cell) to autofill other cells.

6. FORMULAS AND FUNCTIONS

A. Formulas

- **Formula:** a mathematical equation made up of numbers, operators and cell references. It always begins with an = sign.

B. Functions

- **Function:** a built-in (ready-made) formula used to perform a specific task.
- **SUM** — calculates the total in a given range of cells.
- **AVERAGE** — calculates the average in a given range of cells.
- **COUNT** — counts the total number of cells that contain numerical data.
- **MAX** — finds the highest value from a given range of cells.
- **MIN** — finds the lowest value from a given range of cells.

7. CELL REFERENCING (RELATIVE, ABSOLUTE, MIXED)

- **Relative reference:** the default type; it changes automatically when a formula is copied to another cell.
- **Absolute reference:** does NOT change when copied; a \$ sign is added before the column and row (e.g. \$B\$2).
- **Mixed reference:** a combination of both — only the row or only the column stays fixed.
- 🖨 **F4** — Make a cell reference absolute

8. CHARTS IN MS EXCEL

A. Types of Charts

- **Chart:** a graphical representation used to display a series of numeric data.
- **Column chart:** uses vertical columns to compare values across categories.
- **Bar chart:** essentially a horizontal column chart; compares categories using horizontal bars.
- **Pie chart:** a circle divided into slices; the whole circle represents 100% of the data.
- **Doughnut chart:** like a pie chart but has a hole in the middle and can show more than one data series.
- **Line chart:** best used to show a change in trends over time (e.g. monthly temperature).
- **Area chart:** similar to a line chart, but the area below the line is filled with colour.

B. Chart Components

- **Chart Title:** tells what type of data is represented.
- **Legend:** the key used to interpret each data series (colour).
- **Data Labels:** used to display the exact values of the data series.
- **Data Table:** shows the actual data used to create the chart.
- **Axis Titles:** display the titles for the horizontal and vertical axes.

9. PRINTING AND OTHER FEATURES

- To print a worksheet: File → Print → click the Print button (or use the shortcut below).
- 🖨 **Ctrl + P** — Open the Print dialog box
- **Active Sheets:** prints only the selected active sheet(s).
- **Entire Workbook:** prints the whole workbook.
- **Selection:** prints only the selected range of cells.
- 🖨 **Ctrl + ~ (tilde)** — Display all formulas in the worksheet

10. QUICK RECALL — TRUE / FALSE FACTS

- ✓ A workbook can contain many worksheets. — **True**
- ✓ A workbook is a file containing one or more worksheets. — **True**
- ✓ Columns in a worksheet are identified by letters. — **True**
- ✓ A cell is the basic unit for storing data in a spreadsheet. — **True**
- ✗ The Name Box is located on the right side of the Formula Bar. — **False (the Formula Bar is to the right of the Name Box)**
- ✓ The Formula Bar shows the content entered in the active cell. — **True**
- ✗ The AVERAGE function is used to find the total of a range of cells. — **False (SUM finds the total, AVERAGE finds the average)**
- ✓ The COUNT function counts the number of cells that contain numerical data. — **True**
- ✗ The MAX function is used to find the lowest value in a range of cells. — **False (MIN finds the lowest value)**
- ✗ A relative cell reference stays the same when a formula is copied to another cell. — **False (an ABSOLUTE reference stays the same)**
- ✗ A pie chart can be used to show more than 100% of the data. — **False (the full circle always equals 100%)**
- ✗ A formula in Excel can begin with any sign. — **False (a formula always begins with an = sign)**

Textbook Exercise (Flash Lab) — Answers

Match the columns.

Group A

(1) LEN

(2) To select nonadjacent rows or columns

(3) Data labels

(4) To select adjacent rows or columns

(5) Legend

Group B

(a) Select the first row or column; then hold down Shift while you select the last row or column.

(b) Key to interpret each data series.

(c) Click the column or row heading of the first row or column in your selection and hold down Ctrl while you click the column or row headings of other rows or columns.

(d) Function to find the length of a string.

(e) Used to display the exact values of the data series.

Ans: (1) (d) (2) (c) (3) (e) (4) (a) (5) (b)

2. Fill in the blanks.

(1) A function/formula is basically a set of commands to generate a specific result and is made up of various functions.

(2) Formatting features are used to improve the appearance of data in Excel.

(3) The Excel window is a rectangular grid of rows and columns.

- (4) A cell the basic unit for storing data in the spreadsheet.
- (5) The Name Box located above the column heading on the left side of the window displays the location of the cell pointer.
- (6) The AutoFill feature is used to fill numbers, dates, weekdays, etc. in MS Excel.
- (7) Bar charts are horizontal column charts that are used to compare several data categories.
- (8) Line charts are typically used to show trends over a period of time.

Q3. Answer the following in brief.

- (1) Explain any two features of MS Excel.

Ans: 1) Formulas / Functions - perform calculations automatically.
2) Charts - visually represent data.

- (2) Explain the following terms used in MS Excel.

- (a) Column.

Ans: Vertical set of cells labeled as A, B, C, ..., AA, BB etc.

- (b) Cell Reference.

Ans: Each cell is identified with the column letter and row number. (e.g., A5, D9)

- (c) Active cell.

Ans: The currently selected cell where data is entered.

- (d) Formula bar.

Ans: Box showing the formula written in the active cell.

(3) Explain the types of data that can be entered in an Excel worksheet.

Ans: Three types of data can be entered -

1) Numbers - include numeric data like 0 to 9 and characters like +, -, @ etc.

2) Text - include letters, numbers, spaces and special characters as & and @.

3) Formula

(4) Miss Meera wants to enter her class record of 50 students for each subject in separate worksheets. She needs to enter roll numbers from 1 to 50 in each worksheet. Suggest a method to help her fill in the series of numbers in a faster and more efficient way.

Ans: Meera should use Autofill

(5) Mr. Ramesh has maintained his monthly workers wages using Excel software. Some of his workers are on leave and he needs to make changes in his worksheet. Guide him the steps to accomplish this task using Edit mode.

Ans: 1) select the cell to edit.

2) Double click the cell to enter Edit mode

3) Make the changes.

4) Press enter.

(6) Write a short note on any two types of charts used in Excel.

Ans: 1) Bar chart - Uses horizontal bars to compare data across categories.

2) Line chart - Uses connected points to show trends/changes over time.

- (7) Julie is using Excel to keep a track of her walking and exercise activities. She wants to insert a column "Date and Time of Activity" in the worksheet. Also, she wants to change the date and time entered to a different format. Mention all the steps that will help her accomplish these tasks.

Ans: 1) Insert a column and type the heading "Date and Time of Activity".
 2) Select the cell → Right click → Format cells.
 3) Choose Date or Time category → Pick the format → click OK.

- (8) What do you understand by relative and absolute cell referencing?

Ans: Relative Reference - changes automatically when copied to other cells. (e.g. A1)
Absolute Reference - stays fixed when copied, using \$ signs (e.g. \$A\$1)

- (9) Fill in the table given below:

FUNCTION	USE
SUM	Adds all values in a range
AVERAGE	Finds the average of a range.
COUNT	Count cells with numbers.
MAX	Finds the largest value
MIN	Finds the smallest value.

Chapter 2 - Advanced Features of MS Word

1. BULLETS AND LISTS

A. Bullet Points

- A bullet is a dot or a symbol that marks an important line of information.
- MS Word allows you to create both bulleted lists and numbered lists.
- By default, Word uses a simple black dot as the bullet.
- To apply bullets: Home tab → Paragraph group → click Bullets drop-down arrow.
- The Bullet Library appears when you click the Bullets drop-down menu arrow.
- In the Define New Bullet dialog box, you can choose Symbol, Picture, or Font.

☰ **Ctrl + Shift + L** — Create a bullet list

B. Multilevel Lists

- A multilevel list is a list with more than one level.
- It is used to organise items with main categories and sub-categories under them.
- You start a multilevel list by clicking the Multilevel List drop-down arrow found in the Paragraph group (Home tab).

- Press Tab to indent (go deeper/into a sub-level) in a multilevel list.
- Press Shift + Tab to outdent (go back to a higher level) in a multilevel list.

2. HEADERS AND FOOTERS

- **Header:** text or graphic that appears at the top margin of every page.
- **Footer:** text or graphic that appears at the bottom margin of every page.
- Headers and footers are used in multiple-page documents (e.g., to show title, page number, logo).
- To insert a Header: Insert tab → Header & Footer group → click Header → select a style.
- To remove a header from only the first page: select the "Different First Page" check box in the Header & Footer tools.
- To keep different headers on odd and even pages: select the "Different Odd & Even Pages" check box.
- Headers and footers repeat automatically on every page once inserted.

3. TABLES IN MS WORD

A. Basics of Tables

- **Table:** a grid of rows and columns used to organise and display data neatly.
- **Cell:** the intersection of a row and a column in a table.
- To insert a table: Insert tab → click Table → specify rows and columns.
- In the Insert Table dialog box, you must specify the number of columns and rows.
- When you insert a table, two new tabs appear on the Ribbon: Design and Layout.

B. Navigating a Table

-  **Tab** — Move to the next (adjoining) cell
-  **Shift + Tab / Left arrow key** — Move to the previous cell

C. Adding & Deleting Rows/Columns

- To add a row above: Layout tab → Insert Above button.
- To add a row below: Layout tab → Insert Below button.
- To add a row or column, you can also right-click the table and select the Insert option.
- To delete a row: click the Delete option → select Delete Rows.
- To delete a column: click Delete option → select Delete Columns.

D. Merging & Splitting Cells

- **Merge Cells:** combines several cells into one single cell. Select cells → Layout tab → Merge Cells button (in MERGE group).
- **Split Cells:** divides one cell into many cells. Select cell → Layout tab → Split Cells button → enter number of rows/columns → click OK.

E. Formulas in Tables

- MS Word can calculate values in a table using the Formula button (Layout tab → Data group).
- By default, the SUM formula is already displayed in the Formula dialog box.
- By default, MS Word calculates the sum of values in the cells in the column above or on the row to the left.
- To update the total after changing data: select the total cell and press F9.

4. PAGE DESIGN FEATURES

A. Page Borders

- Page Borders are used to insert a decorative or plain border around the pages of a document.
- Found under: Design tab → Page Background group → Page Borders.

B. Page Colour (Background)

- Page Colour is used to give a background colour to the entire document page.
- Found under: Design tab → Page Background group → Page Color.

C. Watermark

- **Watermark:** a graphic or word(s) displayed as the background to a written document (e.g., DRAFT, CONFIDENTIAL).

5. EDITING AND REVIEW TOOLS

A. Find & Replace / Spelling & Grammar

-  **Ctrl + F** — Find (search for a particular word or text)
-  **Ctrl + H** — Find and Replace
-  **F7** — Check Spelling and Grammar

B. Undo & Redo

-  **Ctrl + Z** — Undo the previous action
-  **Ctrl + Y** — Redo the previous undo command

C. Thesaurus & Change Case

- **Thesaurus:** a tool used to search for synonyms and antonyms of certain words.
-  **Shift + F7** — Open the Thesaurus
- Change Case option is used to change the capitalisation of selected text (e.g., UPPERCASE, lowercase, Title Case).
- WordArt is used to insert decorative text styles into the document.

6. CONVERTING TEXT TO TABLE

- In MS Word, you can convert existing text to a table.
- Select the text → Insert tab → Table → Convert Text to Table.

7. QUICK RECALL — TRUE / FALSE FACTS

- ✓ By default, Word uses a simple black dot as the bullet. — **True**
- ✓ You can add bullets to separate and highlight points in a Word document. — **True**
- ✓ Word allows you to create both bulleted lists and numbered lists. — **True**
- ✗ A multilevel list has only one level. — **False**
- ✗ Press Shift + Tab to indent a level in a multilevel list. — **False (Shift+Tab is used to outdent/go back a level)**
- ✓ You can use the Left arrow key to go to the previous cell in a table. — **True**
- ✗ Pressing Tab key moves the cursor to the previous cell in a table. — **False (Tab moves to the NEXT cell)**
- ✓ When you insert a table, two new tabs (Design and Layout) appear on the Ribbon. — **True**
- ✗ To update the total in a table after changing data, you press the F5 key. — **False (press F9)**
- ✓ In MS Word, you can convert text to a table. — **True**

Book's back exercise work



Flash Lab



Q1. Fill in the blanks.

- (1) You can click on the close header/footer button to come out of header/footer insertion mode.
- (2) Tables group is present on the Insert tab.
- (3) You can add bullets/numbering in Microsoft Word to differentiate between the different points you want to make.
- (4) Bullets option is present under the HOME tab in the Paragraph group.
- (5) Multilevel list is used to add multiple levels to the list of data.
- (6) The intersection of a row and column is called a cell.
- (7) Pressing the tab key indents a level in the list.

- (8) To divide a cell into many cells, use the split cells option.
- (9) To merge the cells in a table, go to the Layout tab and click the 'Merge Cells' button.
- (10) F9 key is used to update the total in a cell.

Q2. Answer the following in brief.

- (1) Explain header and footer. Mention its use in a Word document.

Ans: Header is the top section of a page and footer is the bottom section. They are used to add repeated information like page numbers, date, document title, or author name on every page of a document.

(2) Write down the steps to insert different header on odd and even pages.

Ans: 1) Open blank document in Ms Word.

- 2) Click Insert tab → click on Header → choose a header style.
- 3) Go to Header and Footer Tools (Design tab).
- 4) Check the option "Different Odd and Even Pages".
- 5) Type the header for the odd page. Move to an even page and type a different header. 6) Click Close Header and Footer.

(2) Write down the steps to insert a suitable numbering style to your list

(3) Write down the steps to insert a suitable numbering style to your list.

Ans: 1) Click where we want to have numbering.

- 2) Go to the Home tab.
- 3) Click on the Numbering button in the Paragraph group.
- 4) Choose a numbering style from the list.

(4) Write down the steps to change the bullet style in the list typed in a Word document.

Ans: 1. Select the bulleted list.

- 2) Go to the Home tab.
- 3) Click on the drop-down arrow next to the Bullets button.
- 4) Choose a new bullet style from the list.

(5) How can you create a multilevel list?

Ans: 1) Place the cursor where we want the list.

- 2) Go to the Home tab.
- 3) Click on the Multilevel list drop-down menu arrow in the Paragraph group.
- 4) The list library appears.
- 5) Select the desired multilevel style.

(6) How do you insert a table in your document?

(6) How do you insert a table in your document?

Ans: 1) Place the cursor where we want the table.

2) Go to the Insert tab.

3) Click on the Table option.

4) Drag mouse to select the number of rows and columns from the grid.

5)

(7) How can you delete rows and columns in a table?

Ans: 1) Click at the row or column we want to delete.

2) Right click on it, pop up menu will appear.

3) Click on Delete Cells in the pop up menu.

4) Choose Delete Entire Row or Delete Entire Column.

(8) What is the use of Split Cells option?

Ans: The split cells option is used to divide a single cell into multiple rows/columns in a table.

(9) What is the use of Merge Cells option?

Ans: The merge cells option is used to combine two or more cells into one single cell.

(10) How will you calculate the sum in a table?

Ans: To calculate the sum in a table, place the cursor in the cell where we want the result, go to the Layout tab, click on Formula, and use the formula $=SUM(ABOVE)$ or $=SUM(LEFT)$.