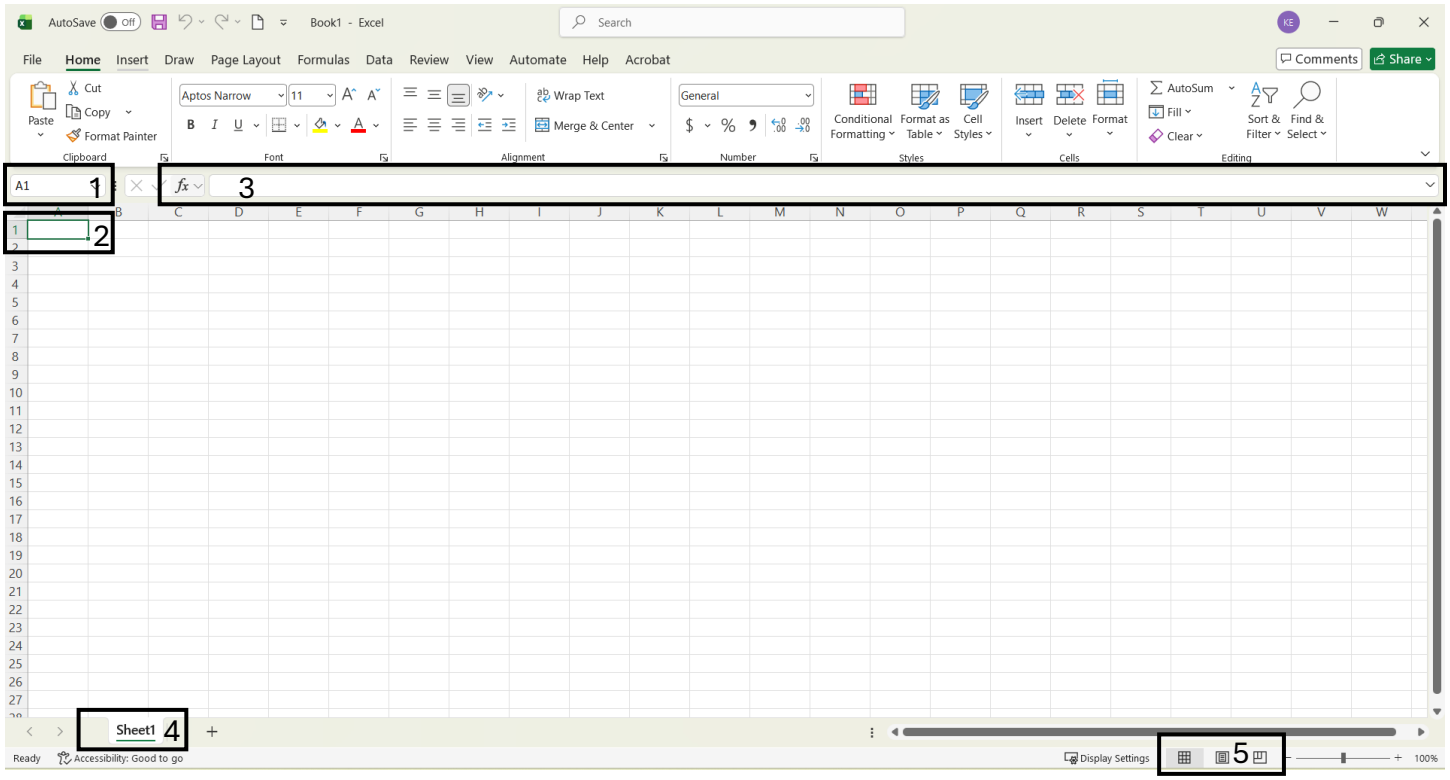
Name: _____ Period: _____ Score: _____/32

Introduction to Excel

Microsoft Excel is an **electronic spreadsheet program** used to organize, calculate, analyze, and present data. It allows users to enter information into rows and columns, perform calculations using formulas and functions, create charts and graphs, sort and filter information, and manage data efficiently. Excel is commonly used for budgets, financial records, gradebooks, schedules, inventory, and data analysis.

An Excel **workbook** is a file that contains one or more related worksheets. Excel workbook files typically use the .xlsx file extension. A **worksheet** is a grid made up of columns and rows where users can enter, organize, and manipulate data.

The **Worksheet Window** is the main area of Excel where data is entered, organized, and displayed in rows and columns. The **Name Box** is located to the left of the Formula Bar and displays the address of the currently selected cell. It can also be used to navigate directly to a specific cell or range of cells. The **Formula Bar** displays the contents of the active cell and allows users to enter or edit text, numbers, and formulas. The **Cell Pointer** is the highlighted border around the active cell, indicating where data will be entered or edited. A **Cell Address** identifies the location of a cell using its column letter and row number, such as A1 or B5. The **Sheet Tabs** are located at the bottom-left of the Excel window and allow users to switch between worksheets. The **View Shortcuts** are located on the status bar and are used to switch between worksheet views.



Label each item called out in the above worksheet.

1. _____

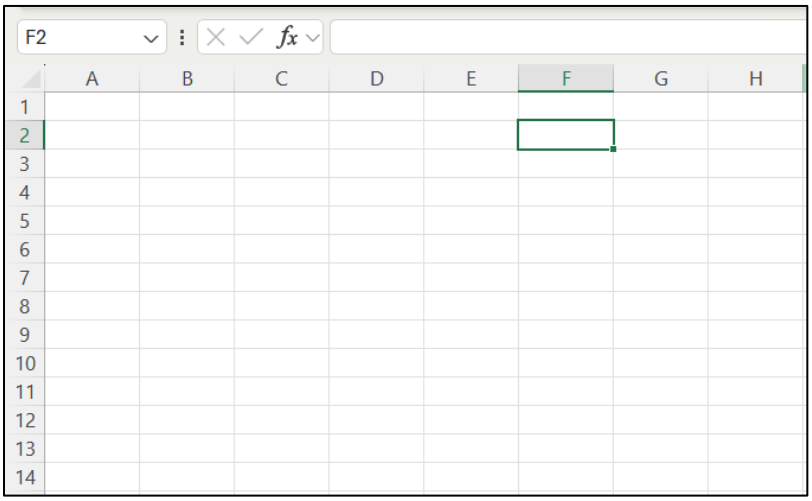
2. _____

3. _____

4. _____

5. _____

To select a cell in Excel, click on the cell using your mouse. The selected cell becomes the active cell and is identified by a highlighted border called the **cell pointer**. You can also select a cell by typing its cell address into the Name Box. To select a range of cells, click and hold the left mouse button on the first cell, then drag across the desired cells and release the mouse button. A **range** is a group of two or more selected cells and is identified by the addresses of the first and last cells, separated by a colon (such as A1:C5). You can also select a range by clicking the first cell, holding down the Shift key, and clicking the last cell. To select multiple cells or ranges that are not next to each other, hold down the Ctrl key while clicking or dragging over the desired cells.



6. What is the active cell? _____

7. Color the cell A4.

8. Color the cell D10.

9. Color the range E8:G13.

10. Color the range A1:C1.

Everything entered into an Excel cell is classified as either a value or a label. **Values** include numbers, formulas, and functions that Excel can use in calculations. **Labels** are text entries used to describe, identify, or provide information about the data in a worksheet. Labels help users understand what the values represent but are not used in calculations.

	A	B	C	D	E
1	**Item**	**Inventory**	**Price Per Item**	**Total**	
2	**Chips**	12.00	1.50	18.00	
3	**Cookies**	2.00	2.50	5.00	
4					
5					

11. Color the cells that contain labels.

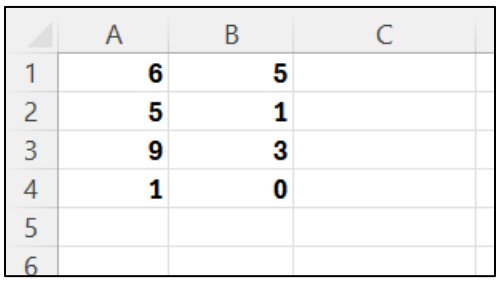
12. Write the range that contains values. _____

Formulas are equations entered into Excel to perform calculations using numbers, cell references, or arithmetic operators. Every formula must begin with an equal sign (=), also known as the formula prefix. Formulas allow users to perform calculations automatically and update results when the data changes. Arithmetic operators are symbols used in formulas to perform mathematical calculations. Excel follows the standard order of operations (PEMDAS) when evaluating formulas. Parentheses can be used to control the order in which calculations are performed.

Excel uses the following arithmetic operators:

- **Addition (+):** Adds numbers together (Example: =A1+B1)
- **Subtraction (-):** Subtracts one number from another (Example: =A1-B1)
- **Multiplication (*):** Multiplies numbers (Example: =A1*B1)
- **Division (/):** Divides one number by another (Example: =A1/B1)
- **Exponentiation (^):** Raises a number to a power (Example: =A1^2)
- **Percent (%):** Calculates a percentage (Example: =A1*10%)

Cell referencing is the use of cell addresses in formulas to identify the locations of the data being used in a calculation. Instead of typing numbers directly into a formula, users can reference cells (such as A1 or B2) that contain the numbers. Using cell references makes formulas easier to create, update, and manage. When the information in a referenced cell changes, Excel automatically recalculates the formula and updates the result. Cell referencing also allows formulas to be copied to other cells without having to rewrite the entire formula. This saves time, reduces errors, and makes worksheets more efficient.



	A	B	C
1	6	5	
2	5	1	
3	9	3	
4	1	0	
5			
6			

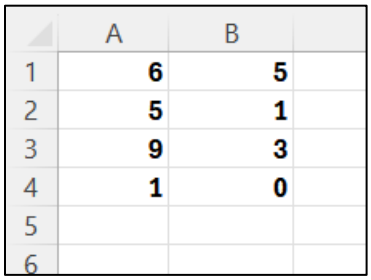
13. Write the formula to add cells A1 and B5. _____

14. Write the formula to multiply cells A3 and A4. _____

15. Write the formula to subtract B1 from A1. _____

Functions are predefined formulas in Excel that perform specific calculations using data in a worksheet. Functions make calculations faster, easier, and more accurate, especially when working with large amounts of data. Instead of creating a formula from scratch, users can use built-in functions to quickly perform calculations. Every function begins with an equal sign (=), followed by the function name and the information needed for the calculation, called arguments. Some commonly used Excel functions include:

- **SUM:** Adds a group of numbers together. Example: =SUM(A1:A5)
- **AVERAGE:** Calculates the average of a group of numbers. Example: =AVERAGE(A1:A5)
- **MAX:** Finds the largest value in a range of cells. Example: =MAX(A1:A5)
- **MIN:** Finds the smallest value in a range of cells. Example: =MIN(A1:A5)
- **COUNT:** Counts the number of cells in a range that contain numbers. Example: =COUNT(A1:A5)



	A	B
1	6	5
2	5	1
3	9	3
4	1	0
5		
6		

16. Write a function to add the range A1:A4. _____

17. Write a function to find the largest cell in the range A1:B4. _____

18. Write a function to find the smallest cell in the range A1:A4. _____

Worksheet Views in Excel allow users to change how a worksheet is displayed on the screen. Excel offers three main worksheet views: Normal View, Page Layout View, and Page Break Preview. **Normal View** is the default setting and displays the worksheet as a grid of rows and columns, making it easy to enter and edit data. **Page Layout View** shows how the worksheet will look when printed, including page margins, headers, and footers. **Page Break Preview** displays where pages will separate when printed and allows users to adjust page breaks to control how information is divided across printed pages. These views help users organize, edit, and prepare worksheets for printing.

19. Which of the following formulas is correct?
    A. =D3+B2
    B. D3+B2
    C. +D3=B2
    D. +D3/B2

20. Which of the following functions inserts the total of a range?
    A. ROUND
    B. MAX
    C. AVERAGE
    D. SUM

21. Which of the following is an example of a range?
    A. D2
    B. D2:F6
    C. =SUM(A1:A8)
    D. =D1+G5

22. What is the primary purpose of Microsoft Excel?
    A. To create and edit videos
    B. To organize, calculate, analyze, and present data
    C. To design websites
    D. To create presentations

23. Which of the following is a common use for Microsoft Excel?
    A. Editing photographs
    B. Creating animations
    C. Managing budgets and financial records
    D. Recording audio

24. What is an Excel workbook?
    A. A collection of related worksheets
    B. A single cell containing data
    C. A group of formulas
    D. A chart created from data

25. What is the default file extension for an Excel workbook?
    A. .docx
    B. .pptx
    C. .pdf
    D. .xlsx

26. What is a worksheet?
    A. A file that contains multiple programs
    B. A grid made up of rows and columns where data is entered and organized
    C. A tool used to create presentations
    D. A collection of charts and graphs

27. What is the main area of Excel where data is entered and displayed?
    A. Formula Bar
    B. Name Box
    C. Worksheet Window
    D. Sheet Tabs

28. Which Excel feature displays the address of the currently selected cell?
    A. Name Box
    B. Formula Bar
    C. Worksheet Window
    D. Status Bar

29. What is the purpose of the Formula Bar?
    A. To switch between worksheets
    B. To display the number of rows in a worksheet
    C. To change the worksheet view
    D. To display, enter, or edit the contents of the active cell

30. What is the Cell Pointer?
    A. The highlighted border around the active cell
    B. The address of a worksheet
    C. The bar used to enter formulas
    D. The button used to print a worksheet

31. Which of the following is an example of a cell address?
    A. Row 5
    B. A1
    C. Column B
    D. Sheet 1

32. What is the purpose of Sheet Tabs?
    A. To switch between worksheets in a workbook
    B. To enter formulas into cells
    C. To identify the active cell
    D. To change the font size