SPREADSHEETS

SECTION A (THEORY)

Spreadsheet: Is an application software used to calculate, organise and analyse numerical data.
Types of Spreadsheets

- **Manual Spreadsheet:** Its simply a ledger book made up rows and columns where data is filled using a pen.
- **Electronic Spreadsheet:** Is an application software used to calculate, organise and analyse numerical data.

Examples of Electronic Spreadsheets.

1. Ms Excel
2. Lotus 1-2-3
3. Corel Quattro pro.
4. VisiCalc
5. VP-Planner
6. SuperCalc
7. Multi-plan

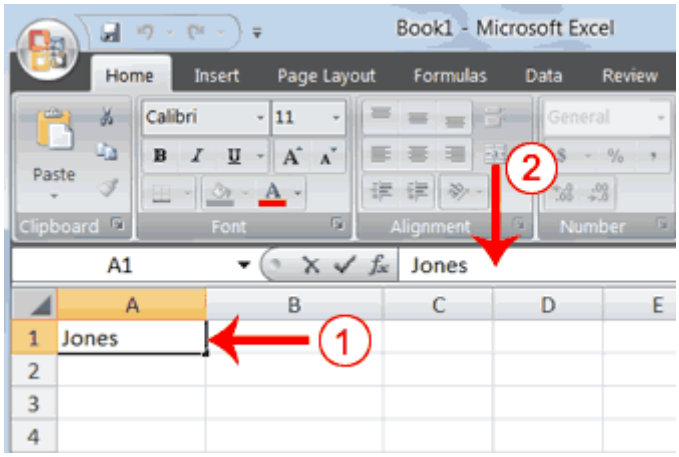
Advantages of Electronic spreadsheets

1. They have large worksheets compared to manual spreadsheets.
2. They automatically adjust the result whenever a value is changed in a cell that is referenced by a formula.
3. They have superior editing and formatting features hence producing neat work.
4. Easier entry of data due to typing aids such as auto-complete, autocorrect etc.
5. It is possible to predicate the outcome of changing values in one or more cells
6. Analytical graphs or charts provide a visual representation of data from a worksheet

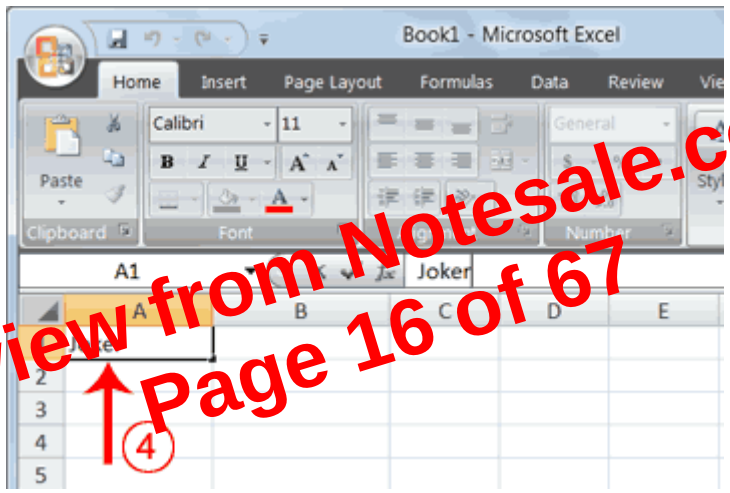
3. Use the Backspace key to delete the "n" and the "h."
4. Type **nes**.
5. Press Enter.

Alternate Method: Editing a Cell by Using the Formula Bar

You can also edit the cell by using the Formula bar. You change "Jones" to "Joker" in the following exercise.



1. Move the cursor to cell A1.
2. Click in the formula area of the Formula bar.



3. Use the backspace key to erase the "s," "e," and "n."
4. Type **ker**.
5. Press Enter.

Alternate Method: Edit a Cell by Double-Clicking in the Cell

You can change "Joker" to "Johnson" as follows:

4. If the check box next to After Pressing Enter Move Selection is not checked, click the box to check it.
5. If Down does not appear in the Direction box, click the down arrow next to the Direction box and then click Down.
6. Click OK. Excel sets the Enter direction to down.

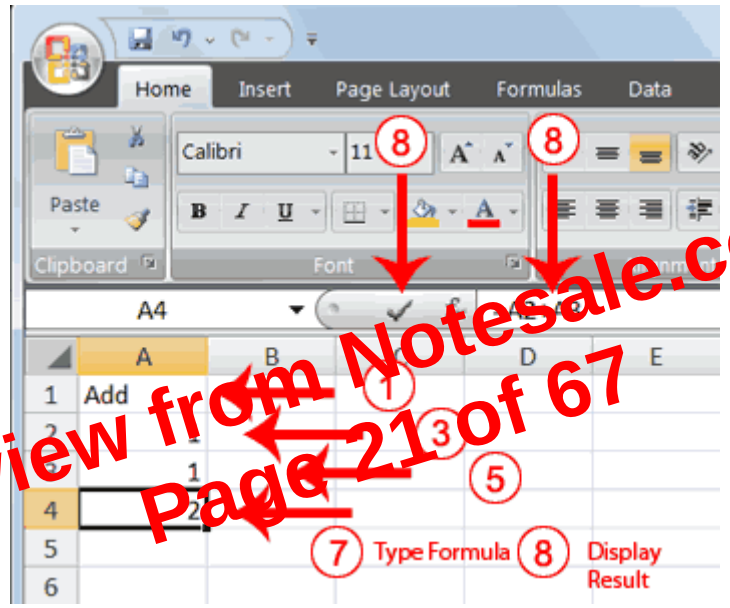
Perform Mathematical Calculations

In Microsoft Excel, you can enter numbers and mathematical formulas into cells. Whether you enter a number or a formula, you can reference the cell when you perform mathematical calculations such as addition, subtraction, multiplication, or division. When entering a mathematical formula, precede the formula with an equal sign. Use the following to indicate the type of calculation you wish to perform:

+ Addition
- Subtraction
* Multiplication
/ Division
^ Exponential

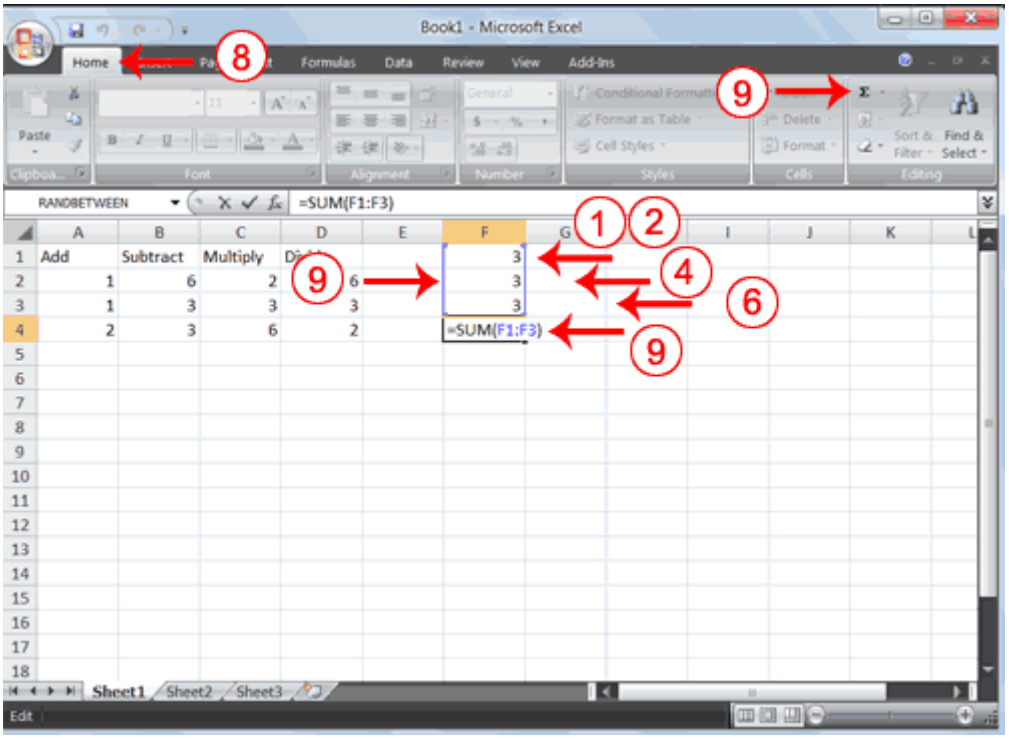
EXERCISE 1

Addition



1. Type **Add** in cell A1.
2. Press Enter. Excel moves down one cell.
3. Type **1** in cell A2.
4. Press Enter. Excel moves down one cell.
5. Type **1** in cell A3.
6. Press Enter. Excel moves down one cell.
7. Type **=A2+A3** in cell A4.
8. Click the check mark on the Formula bar. Excel adds cell A1 to cell A2 and displays the result in cell A4. The formula displays on the Formula bar.

Note: Clicking the check mark on the Formula bar is similar to pressing Enter. Excel records your entry but does not move to the next cell.



1. Go to cell F1.
2. Type **3.**
3. Press Enter. Excel moves down one cell.
4. Type **3**.
5. Press Enter. Excel moves down one cell.
6. Type **3**.
7. Press Enter. Excel moves down one cell to cell F4.
8. Choose the Home tab.
9. Click the AutoSum button Σ in the Editing group. Excel selects cells F1 through F3 and enters a formula in cell F4.

F	G
3	
3	
3	
9	

10. Press Enter. Excel adds cells F1 through F3 and displays the result in cell F4.

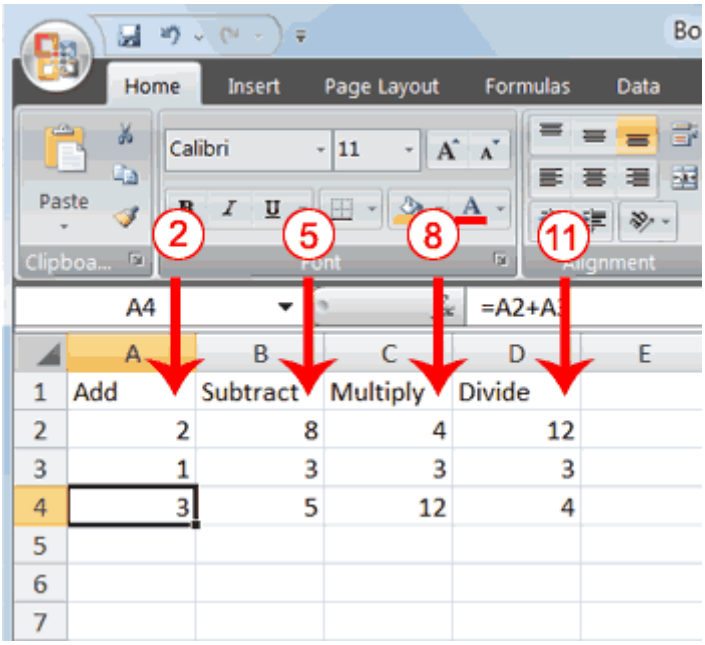
Perform Automatic Calculations

By default, Microsoft Excel recalculates the worksheet as you change cell entries. This makes it easy for you to correct mistakes and analyze a variety of scenarios.

EXERCISE 3

Automatic Calculation

Make the changes described below and note how Microsoft Excel automatically recalculates.



1. Move to cell A2.
2. Type **2**.
3. Press the right arrow key. Excel changes the result in cell A4. Excel adds cell A2 to cell A3 and the new result appears in cell A4.
4. Move to cell B2.
5. Type **8**.
6. Press the right arrow key. Excel subtracts cell B3 from cell B3 and the new result appears in cell B4.
7. Move to cell C2.
8. Type **4**.
9. Press the right arrow key. Excel multiplies cell C2 by cell C3 and the new result appears in cell C4.
10. Move to cell D2.
11. Type **2**.
12. Press the Enter key. Excel divides cell D2 by cell D3 and the new result appears in cell D4.

Align Cell Entries

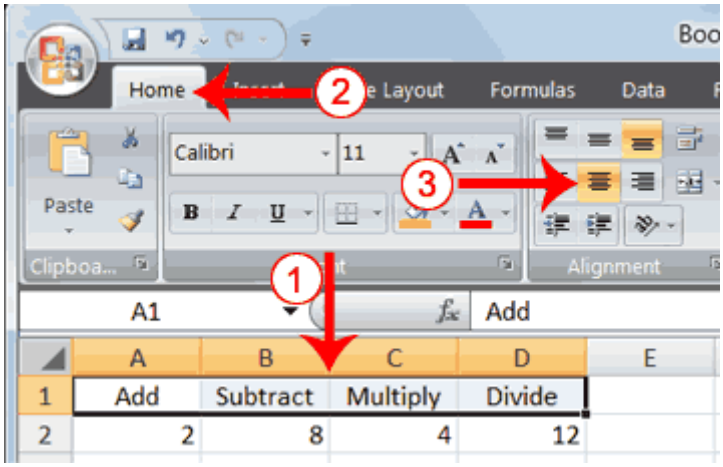
When you type text into a cell, by default your entry aligns with the left side of the cell. When you type numbers into a cell, by default your entry aligns with the right side of the cell. You can change the cell alignment. You can center, left-align, or right-align any cell entry. Look at cells A1 to D1. Note that they are aligned with the left side of the cell.

	A	B	C	D
1	Add	Subtract	Multiply	Divide
2	2	8	4	12

EXERCISE 4

Center

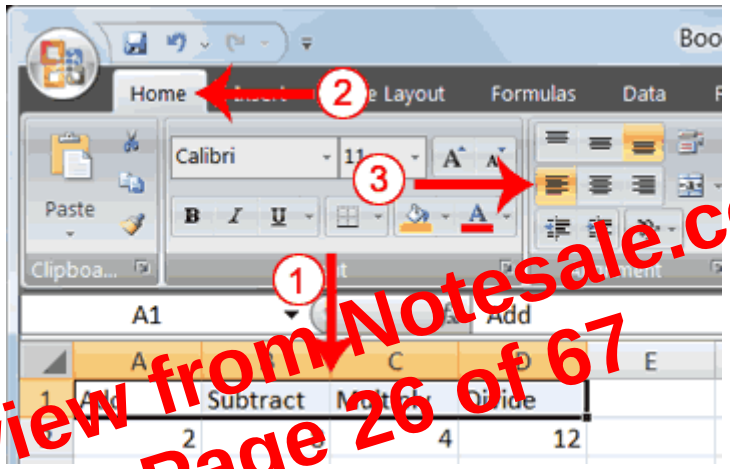
To center cells A1 to D1:



1. Select cells A1 to D1.
2. Choose the Home tab.
3. Click the Center button in the Alignment group. Excel centers each cell's content.

Left-Align

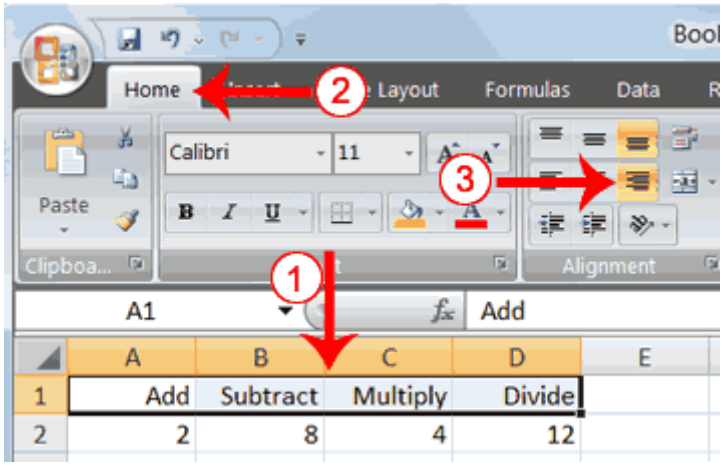
To left-align cells A1 to D1:



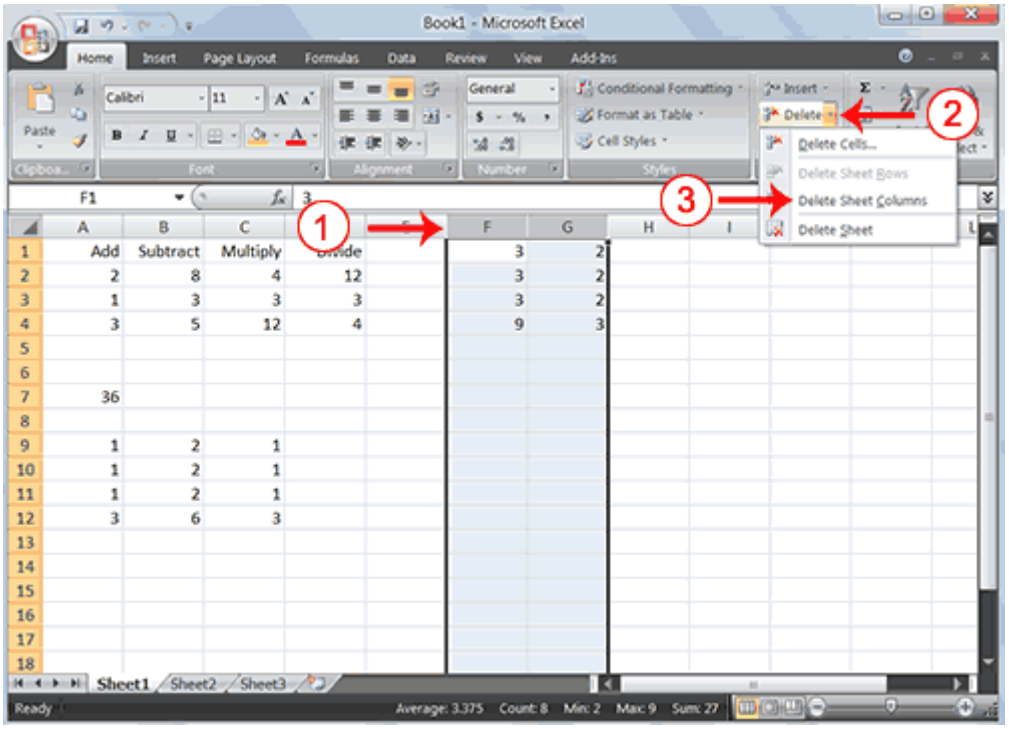
1. Select cells A1 to D1.
2. Choose the Home tab.
3. Click the Align Text Left button in the Alignment group. Excel left-aligns each cell's content.

Right-Align

To right-align cells A1 to D1:

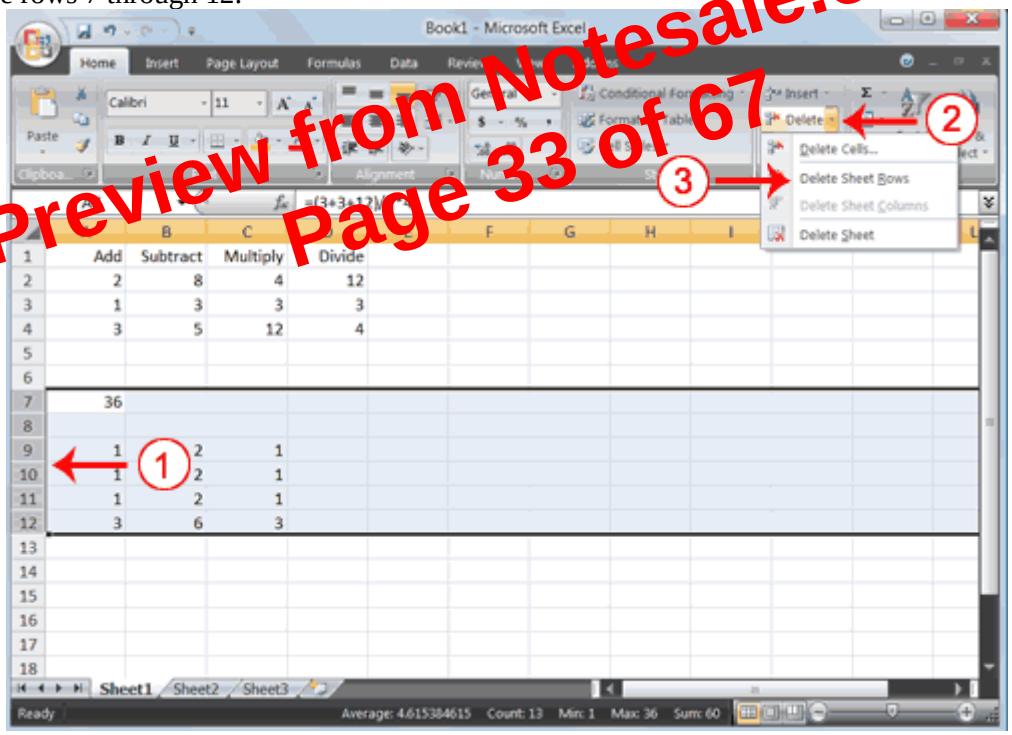


1. Select cells A1 to D1. Click in cell A1.
2. Choose the Home tab.



1. Click the column F indicator and drag to column G.
2. Click the down arrow next to Delete in the Cells group. A menu appears.
3. Click Delete Sheet Columns. Excel deletes the columns you selected.
4. Click anywhere on the worksheet to remove your selection.

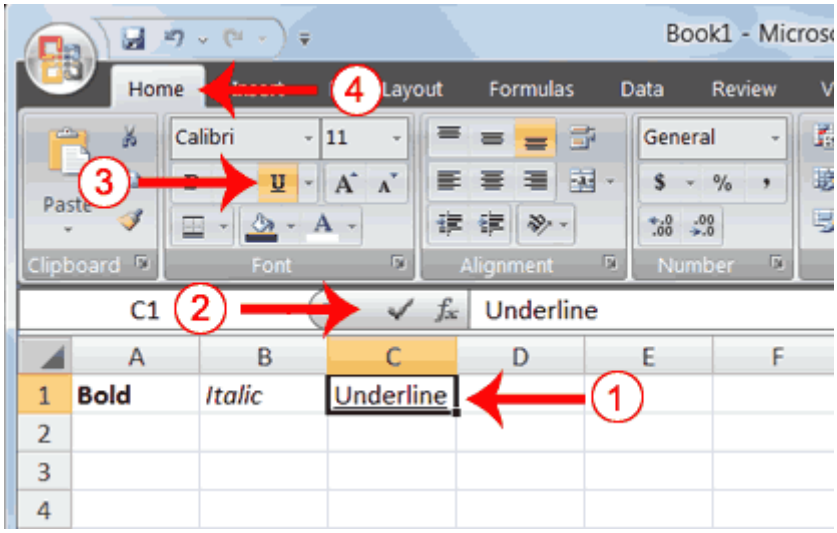
To delete rows 7 through 12:



1. Click the row 7 indicator and drag to row 12.
2. Click the down arrow next to Delete in the Cells group. A menu appears.
3. Click Delete Sheet Rows. Excel deletes the rows you selected.
4. Click anywhere on the worksheet to remove your selection.

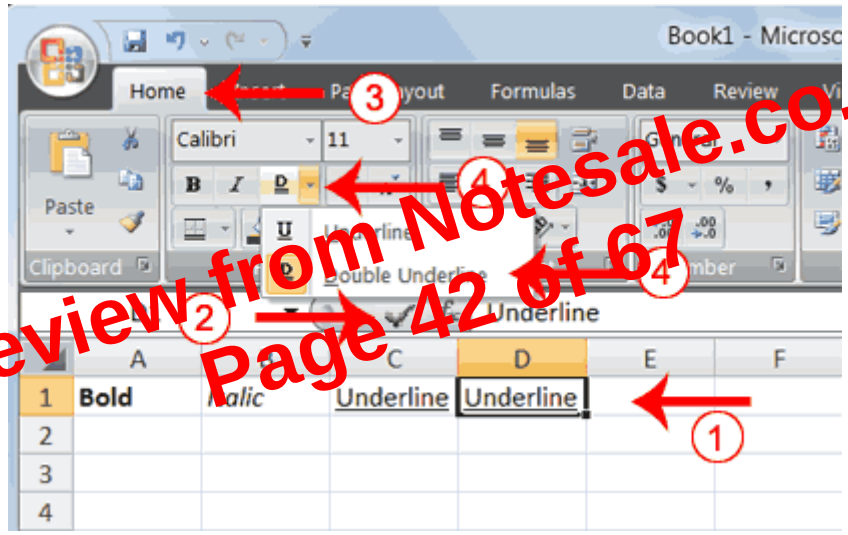
To insert a column:

1. Click on A to select column A.
2. Click the down arrow next to Insert in the Cells group. A menu appears.



1. Type **Underline** in cell C1.
2. Click the check mark located on the Formula bar.
3. Choose the Home tab.
4. Click the Underline button U. Excel underlines the contents of the cell.
5. Click the Underline button U again if you wish to remove the underline.

Double Underline



1. Type **Underline** in cell D1.
2. Click the check mark located on the Formula bar.
3. Choose the Home tab.
4. Click the down arrow next to the Underline button U and then click Double Underline. Excel double-underlines the contents of the cell. Note that the Underline button changes to the button shown here D, a D with a double underline under it. Then next time you click the Underline button, you will get a double underline. If you want a single underline, click the down arrow next to the Double Underline button D and then choose Underline.
5. Click the double underline button again if you wish to remove the double underline.

Bold, Underline, and Italicize

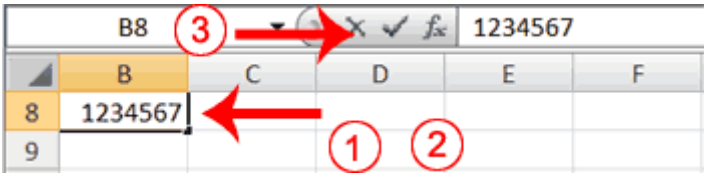
1. Type **All three** in cell E1.
2. Click the check mark located on the Formula bar.
3. Choose the Home tab.
4. Click the Bold button B. Excel bolds the cell contents.
5. Click the Italic button I. Excel italicizes the cell contents.

Format Numbers

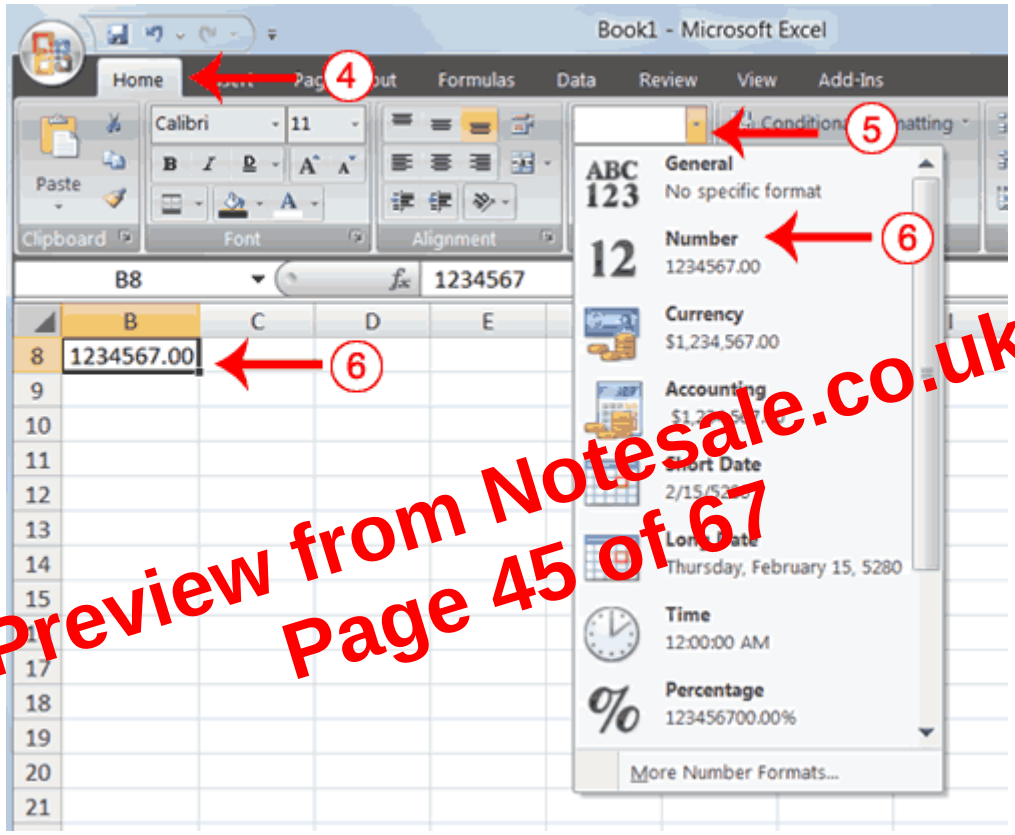
You can format the numbers you enter into Microsoft Excel. For example, you can add commas to separate thousands, specify the number of decimal places, place a dollar sign in front of a number, or display a number as a percent.

EXERCISE 16

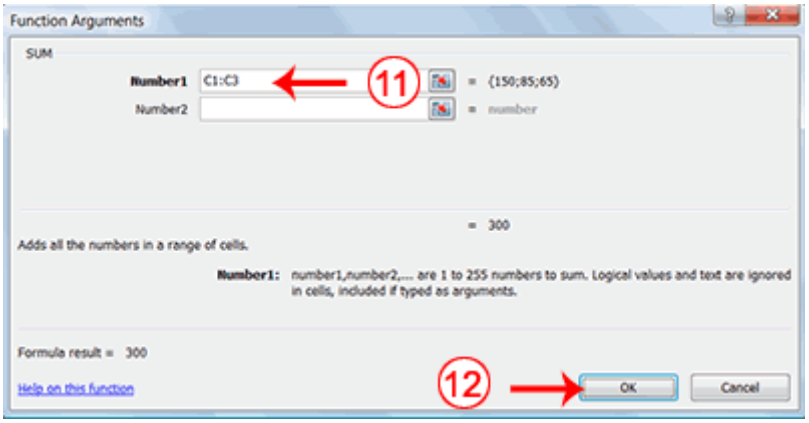
Format Numbers



1. Move to cell B8.
2. Type **1234567**.
3. Click the check mark on the Formula bar.



4. Choose the Home tab.
5. Click the down arrow next to the Number Format box. A menu appears.
6. Click Number. Excel adds two decimal places to the number you typed.



12. Type **C1:C3** in the Number1 field, if it does not automatically appear.
13. Click OK. The sum of cells C1 to C3, which is 300, appears.

Format worksheet

	A	B	C	D
1		12	150	
2		27	85	
3		24	65	
4	Sum	63	300	
5				
6				

1. Move to cell A4.
2. Type the word **Sum**.
3. Select cells B4 to C4.
4. Choose the Home tab.
5. Click the down arrow next to the Borders button.
6. Click Top and Double Bottom Border.

As you learned in Lesson 3, you can also calculate a sum by using the AutoSum button Σ.

Calculate an Average

You can use the AVERAGE function to calculate the average of a series of numbers.

B6 =AVERAGE(B1:B3)

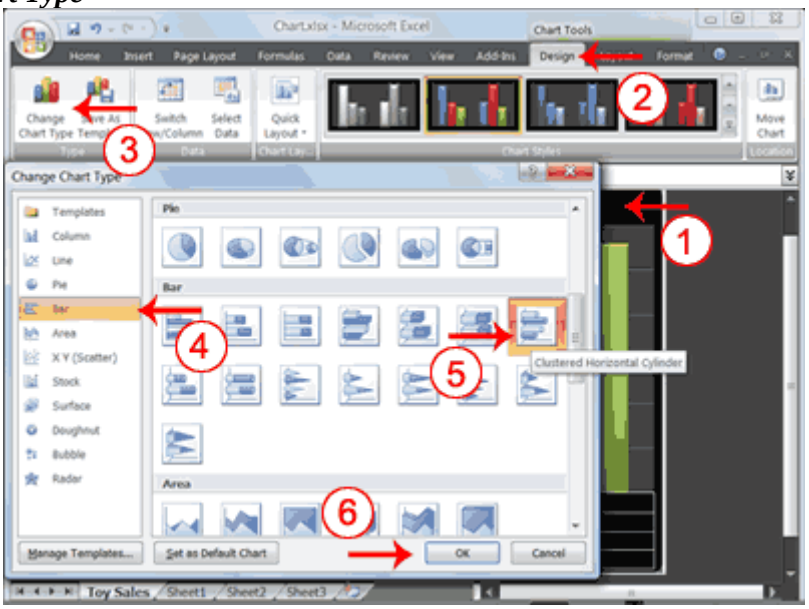
	A	B	C	D	E	F
1		12	150			
2		27	85			
3		24	65			
4	Sum	63	300			
5						
6	Average	21				
7						

1. Move to cell A6.
2. Type **Average**. Press the right arrow key to move to cell B6.
3. Type **=AVERAGE(B1:B3)**.
4. Press Enter. The average of cells B1 to B3, which is 21, appears.

Calculate an Average with the AutoSum Button

In Microsoft Excel, you can use the AutoSum button Σ to calculate an average.

EXERCISE 8
Change the Chart Type



1. Click your chart. The Chart Tools become available.
2. Choose the Design tab.
3. Click Change Chart Type in the Type group. The Chart Type dialog box appears.
4. Click Bar.
5. Click Clustered Horizontal Cylinder.
6. Click OK. Excel changes your chart type.

You have reached the end of Lesson 4. You can save and close your file.