

Quick Reference Card - Get to know Excel: Enter formulas  
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### ADD, DIVIDE, MULTIPLY, AND SUBTRACT

Type an equal sign (=), use math operators, and then press ENTER.

- =10+5 to add
- =10-5 to subtract
- =10\*5 to multiply
- =10/5 to divide

Formulas are visible in the formula bar when you select a cell that contains a result. If the formula bar is not visible, on the **Tools** menu, click **Options**. Click the **View** tab, and select the **Formula bar** check box.

### USE CELL REFERENCES IN FORMULAS

Entering cell references lets Microsoft® Excel automatically update formula results if cell values are changed. For example:

- Type=C4+C7 in a cell.

Or type the equal sign (=), click cell C4, then type the plus sign (+), and finally click cell C7.

Cell references	Refer to values in
A10	the cell in column A and row 10
A10,A20	cell A10 and cell A20
A10:A20	the range of cells in column A and rows 10 through 20
B15:E15	the range of cells in row 15 and columns B through E
A10:E20	the range of cells in columns A through E and rows 10 through 20

**Note:** If results are not updated, on the **Tools** menu click **Options**. Click the **Calculation** tab and select the **Automatic** check box.

### ADD THE VALUES IN A ROW OR COLUMN

Use the SUM function, which is a prewritten formula, to add all the values in a row or column:

1. Click a cell below the column of values or to the right of the row of values.
2. Click the **AutoSum** button on the **Standard** toolbar, and then press ENTER.

### **TO ADD SOME OF THE VALUES IN A COLUMN OR ROW:**

1. Type an equal sign, type **SUM**, then type an opening parenthesis.
2. Type or select the cell references you want to add. A comma (,) separates individual arguments that tell the function what to calculate.
3. Type a closing parenthesis, and then press ENTER.

For example: =SUM(B2:B4,B6) and =SUM(B2,B5,B7)

### **FIND THE AVERAGE, MAXIMUM, OR MINIMUM**

Use the AVERAGE, MAX, or MIN functions.

1. Click a cell below or to the right of values for which you want to find the average (arithmetic mean), the maximum, or the minimum.
2. Click the arrow next to **AutoSum** on the **Standard** toolbar. Click **Average**, **Max**, or **Min**, and then press ENTER.

To see more functions, click **More Functions** on the **AutoSum** list to open the **Insert Function** dialog box.

**Tip:** You can also enter formulas and cell references by typing them in the formula bar after selecting a cell.

### **COPY A FORMULA INTO AN ADJACENT CELL USING THE FILL HANDLE:**

1. Select the cell that contains the formula, then position the mouse pointer over the lower-right corner of the cell until the black cross (+) appears.
2. Drag the fill handle over the cell or cells to which you want to copy the formula, then release the mouse button.

### **COPY A FORMULA WITHOUT USING THE FILL HANDLE:**

1. Select the cell that contains the formula, and on the **Edit** menu, click **Copy**.
2. Select the cell or cells that you want to copy it to.
  - o To copy the formula and any formatting, on the **Edit** menu, click **Paste**.

To copy the formula only, on the **Edit** menu, click **Paste Special**, and then click **Formulas**.

## PRINT FORMULAS

1. Display formulas on the worksheet. On the **Tools** menu, point to **Formula Auditing**, and then click **Formula Auditing Mode**.
2. On the **File** menu, click **Print**.
3. Hide the formulas on the worksheet by repeating step 1.

**Tip:** You can also press CTRL+` (next to the 1 key) to display or hide formulas.

## UNDERSTAND ERROR VALUES

- ##### The column is not wide enough to display the content. Increase column width, shrink contents to fit the column, or apply a different number format.
- #REF! A cell reference is not valid. Cells may have been deleted or pasted over.
- #NAME? You may have misspelled a function name.

Cells with errors such as #NAME? may display a color triangle. If you click the cell, an error button appears to give you some error correction options. How to use the button is not covered in this course.

## USE MORE THAN ONE MATH OPERATOR IN A FORMULA

If a formula has more than one operator, Excel follows the rules of operator precedence instead of just calculating from left to right. Multiplication is done before addition:  $=11.97+3.99*2$  is 19.95. Excel multiplies 3.99 by 2, and then adds the result to 11.97.

Operations inside parentheses take place first:  $=(11.97+3.99)*2$  is 31.92. Excel adds first and then multiplies the result by 2.

Excel does use operators from left to right if they have the same level of precedence. Multiplication and division are on the same level. Addition and subtraction comprise the next level.

## SELECT THE FORMAT FOR VALUES TO USE IN CALCULATIONS

The worksheets in the practice sessions were formatted to display two decimal place numbers by clicking **Cells** on the **Format** menu, clicking the **Number** tab, selecting the **Number** category, and selecting **2** in the **Decimal places** box.