

Insert a Function

Functions are predefined worksheet formulas that enable you to perform complex calculations easily. You can use the Insert Function button on the formula bar to choose a function from a dialog box. You can quickly insert the SUM function using the AutoSum button on the Ribbon, or you can click the AutoSum list arrow to enter other frequently used functions, such as AVERAGE. You can also use the Quick Analysis tool to calculate commonly used functions. Functions are organized into categories, such as Financial, Date & Time, and Statistical, based on their purposes. You can insert a function on its own or as part of another formula. For example, you have used the SUM function on its own to add a range of cells. You could also use the SUM function within a formula that adds a range of cells and then multiplies the total by a decimal. If you use a function alone, it always begins with an equal sign (=) as the formula prefix. **CASE** ▶ You need to calculate the average expenses for the first quarter of the year, and decide to use a function to do so.

1. **Click cell B15**



This is the cell where you want to enter the calculation that averages expenses per country for the first quarter. You want to use the Insert Function dialog box to enter this function.

2. **Click the Insert Function button  on the formula bar**

An equal sign (=) is inserted in the active cell and in the formula bar, and the Insert Function dialog box opens, as shown in **FIGURE B-3**. In this dialog box, you specify the function you want to use by clicking it in the Select a function list. The Select a function list initially displays recently used functions. If you don't see the function you want, you can click the Or select a category list arrow to choose the desired category. If you're not sure which category to choose, you can type the function name or a description in the Search for a function field. The AVERAGE function is a statistical function, but you don't need to open the Statistical category because this function already appears in the Most Recently Used category.

3. **Click AVERAGE in the Select a function list if necessary, read the information that appears under the list, then click OK**

The Function Arguments dialog box opens, in which you define the range of cells you want to average.

4. **Click the Collapse button  in the Number1 field of the Function Arguments dialog box, select the range B4:B11 in the worksheet, then click the Expand button  in the Function Arguments dialog box**

Clicking the Collapse button minimizes the dialog box so you can select cells in the worksheet. When you click the Expand button, the dialog box is restored, as shown in **FIGURE B-4**. You can also begin dragging in the worksheet to automatically minimize the dialog box; after you select the desired range, the dialog box is restored.

5. **Click OK**

The Function Arguments dialog box closes, and the calculated value is displayed in cell B15. The average expenses per country for Quarter 1 is 4353.0788.

6. **Click cell C15, click the AutoSum list arrow  in the Editing group on the HOME tab, then click Average**

A ScreenTip beneath cell C15 displays the arguments needed to complete the function. The text "number1" is shown in boldface type, telling you that the next step is to supply the first cell in the group you want to average. You want to average a range of cells.

7. **Select the range C4:C11 in the worksheet, then click the Enter button  on the formula bar**

The average expenses per country for the second quarter appears in cell C15.

8. **Drag the fill handle from cell C15 to cell E15**

The formula in cell C15 is copied to the rest of the selected range, as shown in **FIGURE B-5**.

9. **Save your work**

FIGURE B-3: Insert Function dialog box

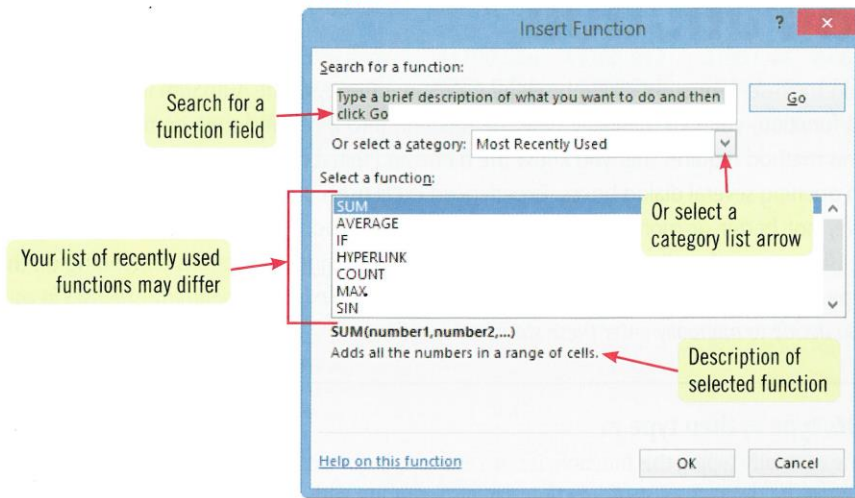


FIGURE B-4: Expanded Function Arguments dialog box

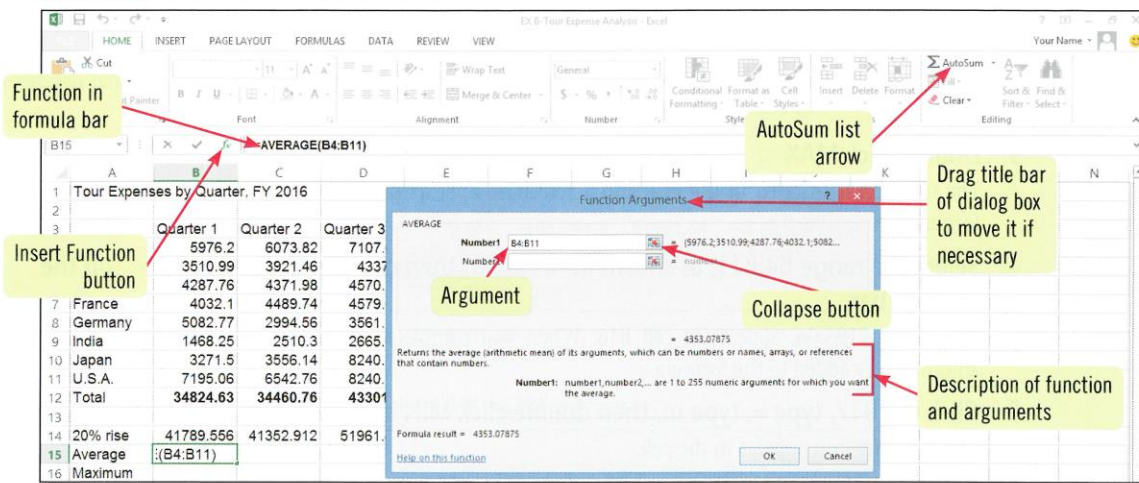


FIGURE B-5: Average functions used in worksheet

