Microsoft Excel: Intermediate

This class is for people who are comfortable with the basics of Excel, such as creating a spreadsheet, entering data, adjusting column sizes, and adjusting the format of text. During this class, we will cover sorting data; calculating sums and averages; and calculating 3D sums across worksheets.

Sorting Data

Open the Excel sorting practice workbook. This is a list of high school T-shirt orders with the buyers’ names, sizes, homeroom numbers and payment methods. The list is fairly lengthy and we want to be able to see the category labels as we scroll through the worksheet. Click on cell A3. Hold down Shift and press Space to select the whole row. Under the View ribbon, click on Freeze Panes. Choose the first option (freeze panes) to freeze all the data above the selected row. Now when you scroll through the worksheet, the column names remain at the top. Click on cell A3 again. Try selecting a whole column by holding down Ctrl and pressing Space. Let’s say you realize cell A3 should read 220-A. To edit the cell, click on it and then press F2. Now you can make changes without replacing all the data.

Let’s sort the data by T-shirt size, to make this worksheet easier to use. Click on cell A3. Under the Home ribbon, click on Sort & Filter, then click on Custom Sort. Click on the Sort By dropdown and choose T-shirt size, then click on OK. This groups T-shirt sizes together and alphabetically sorts the groups. We can also alphabetically sort the last names within each group. To do this, click on cell A3 again. Click on Sort & Filter, then click on Custom Sort. Click on Add Level. Click on the Then By dropdown and click on Last Name. Click on OK. You can continue to add levels if you want to further sort the data. Click on Delete Level to remove it.

What if we want Excel to sort the T-shirt sizes from small to extra large? This can be done by creating a custom list. To create a custom list, enter the data you want to use for the sort, in the correct order, in any blank cells (for example, cells K3 – K6.) Write Small, Medium, Large, and X-Large in order, with each value in its own cell. Note that the way you write it out must exactly match the data (X-Large, not X Large or Extra Large.) Select the four cells. Click on File, then Options, then Advanced. Scroll down to the General section and click on Edit Custom Lists. You should see your selected cell range next to the Import button. Click on Import. Now when you click on cell A3 and go back to the custom sort menu, choose Custom List under Order and select your list. Now the spreadsheet sorts in size order.
Some people placed more than one order. You could consolidate their listings using the Merge & Center tool. Click and drag from the first Ackerman order in cell C3 to the last order in cell C5. This selects the three instances of Ackerman. Under the Home ribbon, click on Merge & Center. Now you should only see Ackerman listed once, taking up three cells. Try doing the same thing for the first name.

**Functions**

Switch to the Excel budget practice worksheet. This shows six months of expenses broken down by category. We can use functions to calculate the totals and averages to fill in the blanks. First, let’s total up the amount spent on rent. Click on cell J9. Under the Home ribbon, click on AutoSum.

Excel will guess the range that you want to calculate. You can edit the function in the formula bar. We do not want the Average column included in this calculation, so edit the function to end at cell H9. The formula bar should read =SUM(C9:H9). Press Enter on the keyboard. The total should read 2670.

Since the rest of the total column will use the same type of function covering the same range in their respective rows, we can “fill down” the function into the cells below, rather than calculating each sum one at a time. To do this, select cell J9, then move your mouse to the bottom right corner of the cell. Your cursor should become a + symbol. Click and hold down, then drag the mouse down until you get to cell J31. Release the mouse and all the sums appear. Use this method to calculate the monthly totals in the house, car, charges, and personal sections. Then calculate the grand totals at the bottom of the worksheet.

To calculate the average amount spent on rent, click on cell I9. Under the Home ribbon, click on the dropdown arrow on the right side of the AutoSum button. Click on Average. Confirm that the formula bar shows the range you wish to calculate and press Enter on the keyboard. Fill down the Average function for the rest of the column.

Let’s say we want all the numbers to appear with the dollar sign and two decimal points. Hold down Ctrl and press A to select all the data. Next, hold down Ctrl and Shift, then press the $ key. All values change to the currency format. Right click on a cell and click on format cell to see more formatting options.

**3D Sums**

Let’s say I track how much I spend on food, transportation, and entertainment every day for five weeks. Open the 3D Sums practice workbook. I have these figures broken down by day in five different worksheets in the same workbook. Click through the weeks listed in tabs along the bottom of the workbook to see the statistics for each week.
I can use 3D Sums to calculate the total for each day of the week across the five week period. This way, I can see which day of the week tends to be most expensive and which day tends to be least expensive. In the Total tab, click cell B2, and type `=SUM(` to start the formula. Click the Week 1 tab, then hold down the shift key and click the Week 5 tab to select it and all the tabs in between. Click cell B2, then type a close parenthesis to close the formula. Hit enter, and the total will appear in the Total tab, cell B2. From there, click cell B2, hover the mouse over the lower right corner of the cell until the cursor turns in to a plus sign. Double click the plus sign to duplicate the formula in the cells below then drag the formula across to fill the remaining cells in the table.

Try adding a total column to each week’s worksheet. Enter functions to calculate the total spent on food, transportation and entertainment each week. Then use 3D Sums to calculate the total amount spent in each category during the five week period.

Questions? Contact Adult Services at askref@elmwoodparklibrary.org or 708-395-1217.