

Microsoft Excel – Part 1

Lesson 1 – Math

1. In this lesson you will learn how to do some simple calculations, we will learn how to add, subtract, multiply and divide. The great thing about using a spreadsheet to do any calculations is that the spreadsheet will never make a mistake. As long as you enter the right numbers and formulas, you will always get the right answers.
2. Go to Start>Programs> Microsoft Office> Microsoft Excel.
3. Save this file as “Excel Your Name”. You will hand this in when you have completed parts 1-5.

Data Entry (Spreadsheet)

4. Type the following into the cell listed by it:

In A1, type Your First Name

In B1, type Your Last Name

In A3, type Addition

In B3, type Subtraction

In C3, type Multiplication

In D3, type Division

In A4, type 6

In B4, type 6

In C4, type 6

In D4, type 6



In A5, type 2

In B5, type 2

In C5, type 2

In D5, type 2

	A	B	C	D
1	Jane	Doe		
2				
3	Addition	Subtraction	Multiplication	Division
4	6	6	6	6
5	2	2	2	2
6	8	4	12	3
7				

5. You will need to use the sizing tool to make your boxes the correct size for each column. The sizing tool will show up if you put your cursor on the line between the columns and rows. It looks like a cross with 2 arrows and will allow you to drag your cells bigger and smaller. (Look at picture next to this.) Put your cursor there.
6. Because you are going to do some mathematical calculations, let's add a line below the bottom numbers to show that there has been a calculation, which is common in most math problems. Select 
7. We also need to put some borders around our problems. Click in cell A1 and drag to D6. Click on the arrow by the bottom borders button and select the outside borders button. (It is on the Home Tab in the Font Area.)
8. Finally, you need to name your page in the excel workbook. Double click in the first tab at the bottom of the excel page to highlight where it says Sheet 1. Change the name to Lesson 1. 

ADDITION

Before we start typing our formulas, there are some important pieces of information we need to know about formulas:

- All formulas must start with an EQUAL SIGN (=)
 - Formulas DO NOT contain spaces.
1. We are ready to start adding formulas.
 2. Click in cell A6.
 3. Remember our formula must start with an = sign.
 4. Type an (=) BUT DO NOT PRESS ENTER.

Because we want to add the numbers 6 and 2, we could just type =6+2. However, it is much better to type the cell address just in case we want to change the number later.

The sign used to add is the plus sign (+), and it is made by holding the shift key and pressing the button to the left of the backspace key. The plus sign and equal sign are the same key.

5. After the equal sign, click on cell A4
6. Type +
7. After the + sign click on cell A5
8. Press enter.

Your answer should be 8.

SUBTRACTION

Click in cell B6

Repeat the instructions above substituting a minus (-) sign for the addition sign.

Your answer should be 4.

MULTIPLICATION

Click in cell C6.

Repeat the instructions again substituting a multiplication (*) sign for the addition sign.

Your answer should be 12.

DIVISION

Click in cell D6.

Repeat the instructions again substituting a division (/) sign for the addition sign.

Your answer should be 3.

Save again (ctrl s).

EDITING DATA

That was pretty easy math. We could probably have even done it in our heads. Now we are going to try something a little different. We are going to change the numbers and see if our formulas correct our answers.

1. Click in cell A4. Type the number 50 and hit enter.

You do not need to do anything special when you want to change the number. The Total in A6 should now be 52. That's why we encourage you to use formulas.

2. Change the remaining three 6s to 50. All your answers should change as you change the numbers.

3. Click in Cell A5. Replace 2 with 20.

4. Change the remaining three 2s to 20.

5. Check and see if your look likes the following.

Let's Try Another Set of Problems on Your Own

	A	B	C	D
1	Jane	Doe		
2				
3	Addition	Subtraction	Multiplication	Division
4	50	50	50	50
5	20	20	20	20
6	70	30	1000	2
7				

1. Enter the following data:

Cell Type in

A12 Your First Name

B12 Your Last Name

C 12 Comp App

D12 Your Class Period

A14 Addition

B14 Subtraction

C14 Multiplication

D14 Division

A15 143

B15 500

C15 125

D15 97486

A16 357

B16 143

C16 23

D16 1234

2. Highlight A16 to D16 and place a bottom border under the cells.

3. Highlight A12 to D17 and place an outside border around all of the cells.

4. Type the correct addition formula in cell A17 and hit Enter.
5. Type the correct subtraction formula in cell B17 and hit Enter.
6. Type the correct multiplication formula in cell C17 and Hit Enter.
7. Type the correct division formula in D17 and hit Enter.

RUBRIC and SELF CHECKLIST! ✓

Step	Self Check List ✓	Teacher's Checklist
1 st Step- Data Entry		2 Point
2 nd Step- Formulas		3 Point
3 rd Step- Data Entry		2 Point
4 th Step- Formulas		3 Point
	Total	___/10 Points

Microsoft Excel – Part 2

Lesson 2 Sum Function Formula

We have used each of the 4 Basic Formulas (addition, subtraction, multiplication and division) in the previous lesson. Now, we will learn a shortcut when we have a lot of numbers to calculate. A **Function Formula** will perform predetermined calculations using specific cells. There are over 200 function formulas available in Microsoft Excel, including some calculations as simple as counting the quantity of items to very complex, such as statistics or financial calculations. In the lesson, we will learn to use four function formulas: sum, minimum, maximum and average.

Data Entry (Spreadsheet)

We are going to record the data from a bake sale. The 8th grade is conducting to raise money for a homeless shelter and soup kitchen in the neighborhood.

1. Open up your file called Excel Your Name if it is not already opened. Click on the Sheet 2 tab at the bottom of the page. This will be a new page in your Excel workbook.
2. Type **Baked Goods** in cell A1.
3. Type **House A** in cell B1.
4. Type **House B** in cell C1.
5. Type **House C** in cell D1.
6. Type **House D** in cell E1.
7. Type Oatmeal Cookie in cell A2.

8. Move to cell A3 and type **Upside-Down Cake**.
9. Move to cell A4 and type **Banana Bread**.
10. Move to cell A5 and type **Apple Pie**. Hit Enter.

*** You need to widen column to accommodate the longest names.***

11. Put your cursor over the A in the first column and drag it across until you get to column E. Every column should now be highlighted in blue. From the home tab find the cell section in the ribbon and click Format. From the pop up window select AutoFit Column Width. Your columns should now be sized correctly.
12. Enter the following numbers in the appropriate columns in your spreadsheet.

	A	B	C	D	E
1	Baked Goods	House A	House B	House C	House D
2	Oatmeal Cookies	25	36	40	26
3	Upside-Down Cake	38	27	17	23
4	Banana Bread	14	50	19	30
5	Apple Pie	30	12	20	15

13. Select row 1 by clicking on the 1 and **Bold** the headings by hitting the **B**.
14. Save your work as Last Name Goods.

Sum Function Formula

We are now ready to start calculating our numbers.

1. Click in cell A6 and type **Totals By House**.
2. Now, go to cell B6.

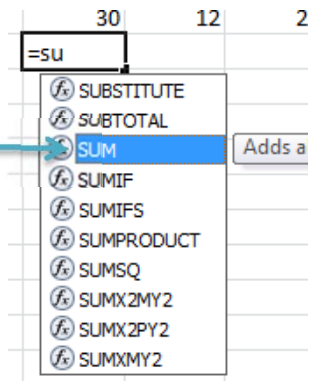
We need to type a formula that will add all the numbers of baked goods that each house sold.

3. Type **=B2+B3+B4+B5** and press **Enter**. You should come up with 107.

That was a pretty long formula. We will use a shorter formula to add the next list of numbers.

If we think about Math classes, we can probably remember that the word "Sum" is another way of saying "add". The **sum function formula** will do exactly that.

4. Click in cell C6. Type = and then start to type sum. After you have typed "su" a pop up selection list should show itself from which you can double click the SUM formula.
5. It should look like **=SUM(**
6. Now click in C2
7. Type in a colon
8. Finally, click in C5
9. Press **Enter**. You should get the answer 125.
10. Repeat for column D and E.



11. Hit Save.

Shortcut to the Sum Formula

We also want to know which Baked Good was the most popular.

1. Click in cell F1, **Type Totals by Item**, and press **Enter**.

*** This label is too long so adjust column widths by putting cursor between column headings F and G. It will turn into the sizing tool. Cross with 2 arrows.***

We are going to use the sum formula again to add the numbers, except this time we are adding horizontally instead of vertically.

2. You should now be in cell F2.
3. Type **=SUM(B2:E2)** and press **Enter**. You should get 127.

Again, we will use the sum formula; however, we are going to use a shortcut.

4. Click in cell F3.
5. Now, click the **auto sum button** (Σ) in the upper left hand corner of the Formulas tab. Press **Enter**.

Your computer will automatically add.

6. Click in cell F4.
7. Click the **auto sum button** again. Now your computer anticipates that you want to add cells F2:F3. However, that is not correct.
8. Select cells B4 through E4. Your formula should now show **=SUM(B4:E4)**. Press **enter** to accept the formula. You should get 113.
9. Click in cell F5 and click the **auto sum button** again. It will put in wrong formula. Correct by selecting B5 to E5. Your formula should now show **=SUM(B5:E5)**.
10. Click in cell F6, hit the **auto sum button** and it will add you F column to give a total of 422.

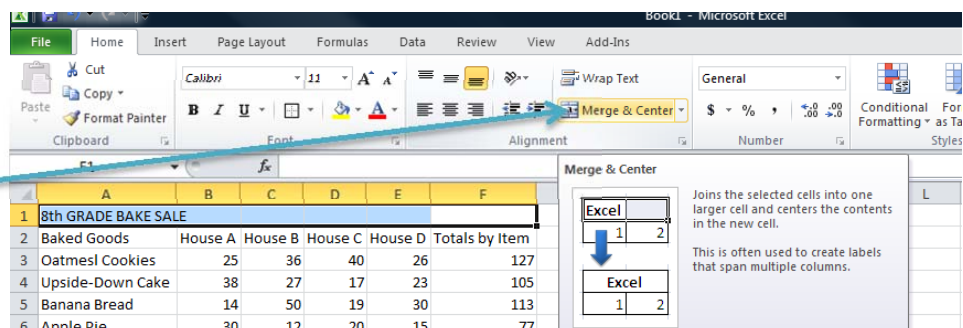
Inserting a Title

We would like to create a title across the top of our spreadsheet.

1. **Right click on Row 1** and go to **Insert**. Your information should move down 1 row.
2. Click in cell A1 and type in all caps **8TH GRADE BAKE SALE**. Press **enter**.

We want the title to be centered across the columns of our spreadsheet.

3. Select cells A1 through F1 and click the merge and center button. On the Home Tab ribbon in the



Alignment section.

Now, we will change the font and size of title.

4. Select your title. Click the drop-down arrow next to font size and change the font size to 20.
5. Click the drop-down arrow next to the font choices; change the font of the title to anything other than Calibri. Make sure it is legible.
6. Select all information in Row 7. Click the bold button on your home tab. Also, bold everything in column F.
7. Widen column F to accommodate the longest entry.
8. Save your work.

DATA EDITING

After careful examination of the spreadsheet, we found some of the houses incorrectly reported their goods sales.

1. The following changes need to be made.
 - A. House A should have 16 banana bread sales and 34 apple pie sales.
 - B. House B should have 29 banana bread sales and 28 upside-down cake sales.
 - C. House C should have 22 upside-down cakes and 17 banana bread sales.
 - D. House D should have 15 oatmeal cookie sales and 26 apple pie sales.
2. Change the numbers on the sheet to reflect the changes. As you change, your totals will automatically change.
3. Save your work.

PAGE SET-UP

1. Click on the Insert Tab.
2. Click on the Header Footer Button.
3. Click in the left section, type: Your First Name and Last Name. Click in the middle section, type: Class Period. Click in the right section, type: Comp App.

Now we want you to add borders around your data.

4. Click and drag from A2 to F7.
5. Right click> Format Cell> Border Tab> Outline and Inside. Hit OK.
6. Your document should look like this.

	A	B	C	D	E	F
1	8th GRADE BAKE SALE					
2	Baked Goods	House A	House B	House C	House D	Totals by Item
3	Oatmeal Cookies	25	36	40	15	116
4	Upside-Down Cake	38	28	22	23	111
5	Banana Bread	16	29	17	30	92
6	Apple Pie	34	12	20	26	92
7		113	105	99	94	411
8						

Data Analysis

1. In cell A12, type which good was the largest seller in House C?
2. In cell A13, type which good was the smallest seller in House D?
3. In cell A 14, type which house sold the least?
4. In cell A15, type which good sold the most?

NAME ASSIGNMENT

Click on the bottom tab and rename Sheet 2 as Lesson 2.

Save your file.

RUBRIC and SELF CHECKLIST!

Skill	Self Check List 	Teacher's Checklist
Data Entry		3 Point
Totals		5 Point
Title		1 Point
Header Footer		1 Point
	Total	___/10 Points