

MS Excel 2010

Ken McKee

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MS Excel 2010

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MS Excel 2010

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MS Excel 2010

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Learn by Doing

Doing is 10 times faster, 10 times easier, and results in 10 times the comprehension.

We learn by doing. “Doing” results in immediate, positive and negative feedback, from which we alter our behavior to better approximate “correct” doing. Anyone sitting in front of a computer wants to start working immediately. This training manual is comprised of learner centered activities which start the user creating applied examples where the use and need of spreadsheet skills is obvious and requires little or no introduction.

How to use this Manual

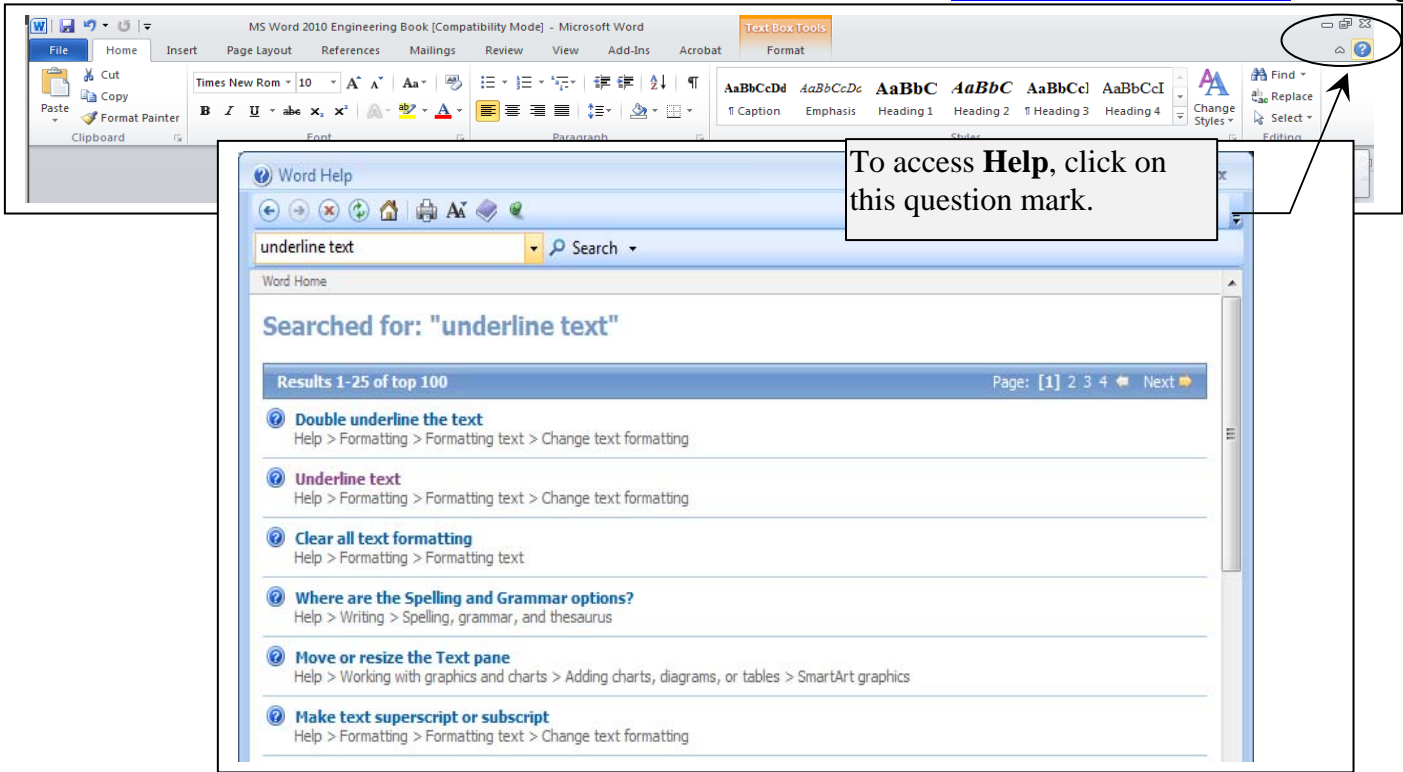
This manual is designed for students to *work* through on their own, at their own pace, without lecture!

Lectures, or theory, are embedded in the creation of applied examples. By creating these applied documents, you know where they are used in the “real world” and how to apply them.

This is a workbook that has simple mathematical theory embedded into the practical documents rather than the typical introduction section which discusses abstract ideas that you will *eventually* get to see and do. This approach is considered “minimalist” and has proven to be highly effective over my 30 years of teaching and is statistically supported through vigorous research. The more meaningful questions a student works through, the deeper their understanding and the student who works through practical problems will encounter all of the ideas that would have normally been discussed (abstractly) in an introduction but will have a significantly deeper appreciation of the same material! There is an incredible efficiency in “getting underway” with practical problems immediately. You will be continually surprised at how much material a student can successfully digest in a regular class period when freed up to investigate interesting problems by themselves rather than passively listening to a lecture. You will find that students can move ten times as quickly through the material with a corresponding increase in comprehension and retention.

The assignments were created in conjunction with the Mathematics Department and are examples taken from various math and engineering areas commonly used in the work world. The flow of the text is one that hopefully fosters curiosity and the understanding of how to create professional looking documents.

The instructors “job” is to answer all questions and, if necessary, give mini lectures or hold discussion sessions – in other words, “the cleanup crew”. Often an entire lecture can be reduced to a sentence when presented at the “right” time – when the student has done the work necessary and is now “ready”.



Using the Help Menu (click on the ?)

What are the 5 different types of underlines that you find here?

- 1.
- 2.
- 3.
- 4.
- 5.

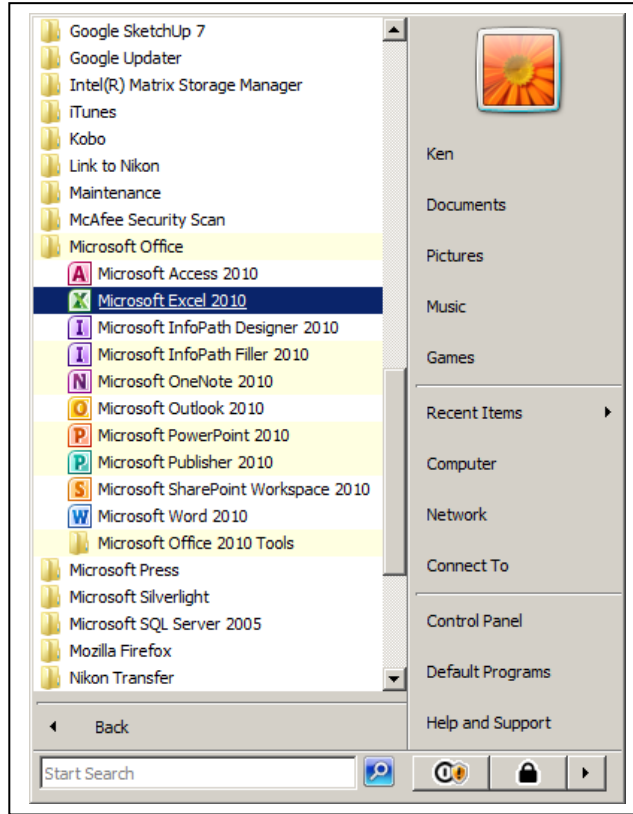
What are the steps to underline “Words Only”?

What are the steps to create a “Decorative Underline”?

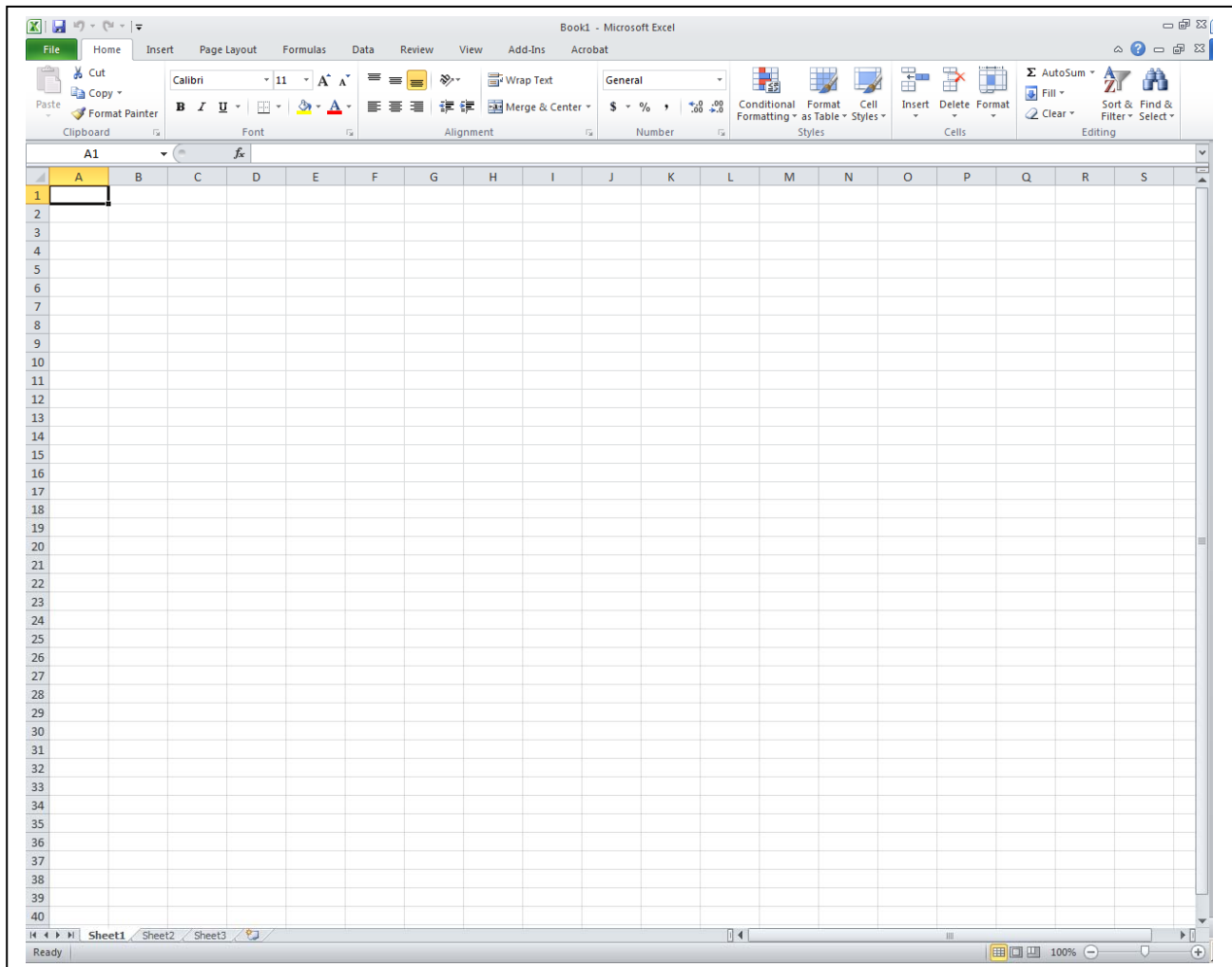
What are the steps for subscripting (H₂O)? (Type in the word “subscript” in the Help, Search area, and proceed)

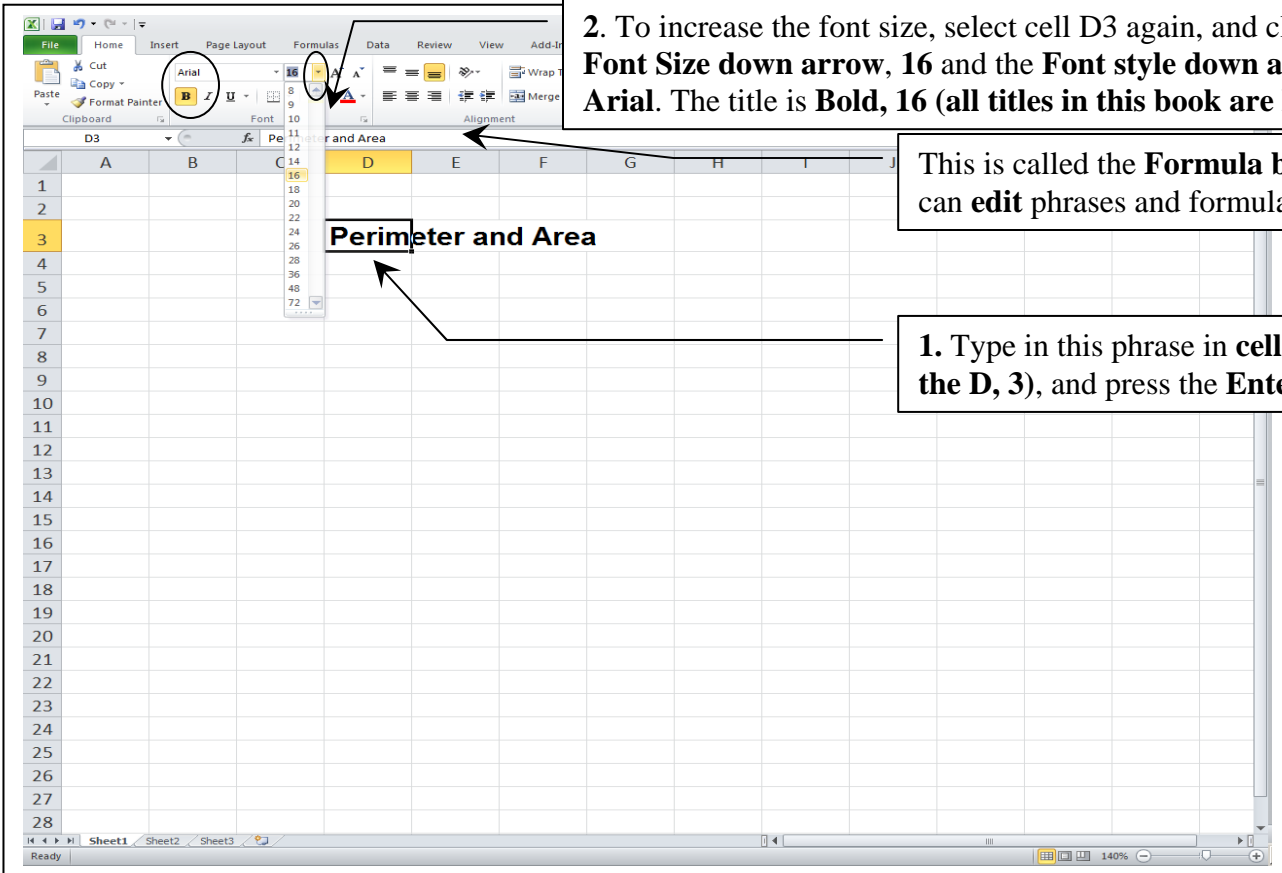
What are the steps for creating a left indent for a paragraph? (Type “left indent” in the Help, Search area,

Getting Started with MS Excel



Click on the **Start** button, **All Programs**, **Microsoft Office**, **MS Excel**.



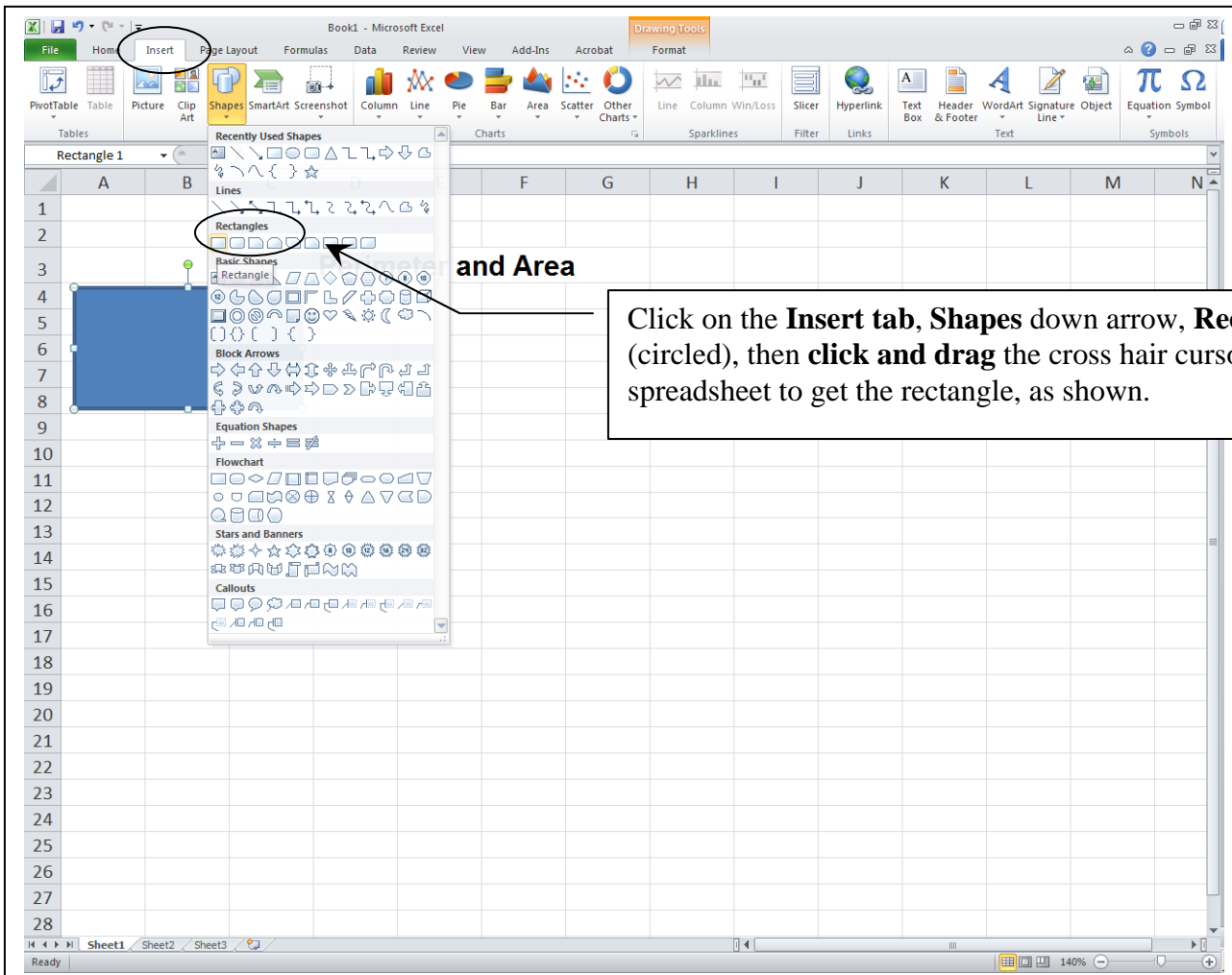


2. To increase the font size, select cell D3 again, and click on the **Font Size down arrow, 16** and the **Font style down arrow to Arial**. The title is **Bold, 16** (all titles in this book are **Bold, 16**).

This is called the **Formula bar**. You can **edit** phrases and formulas in here.

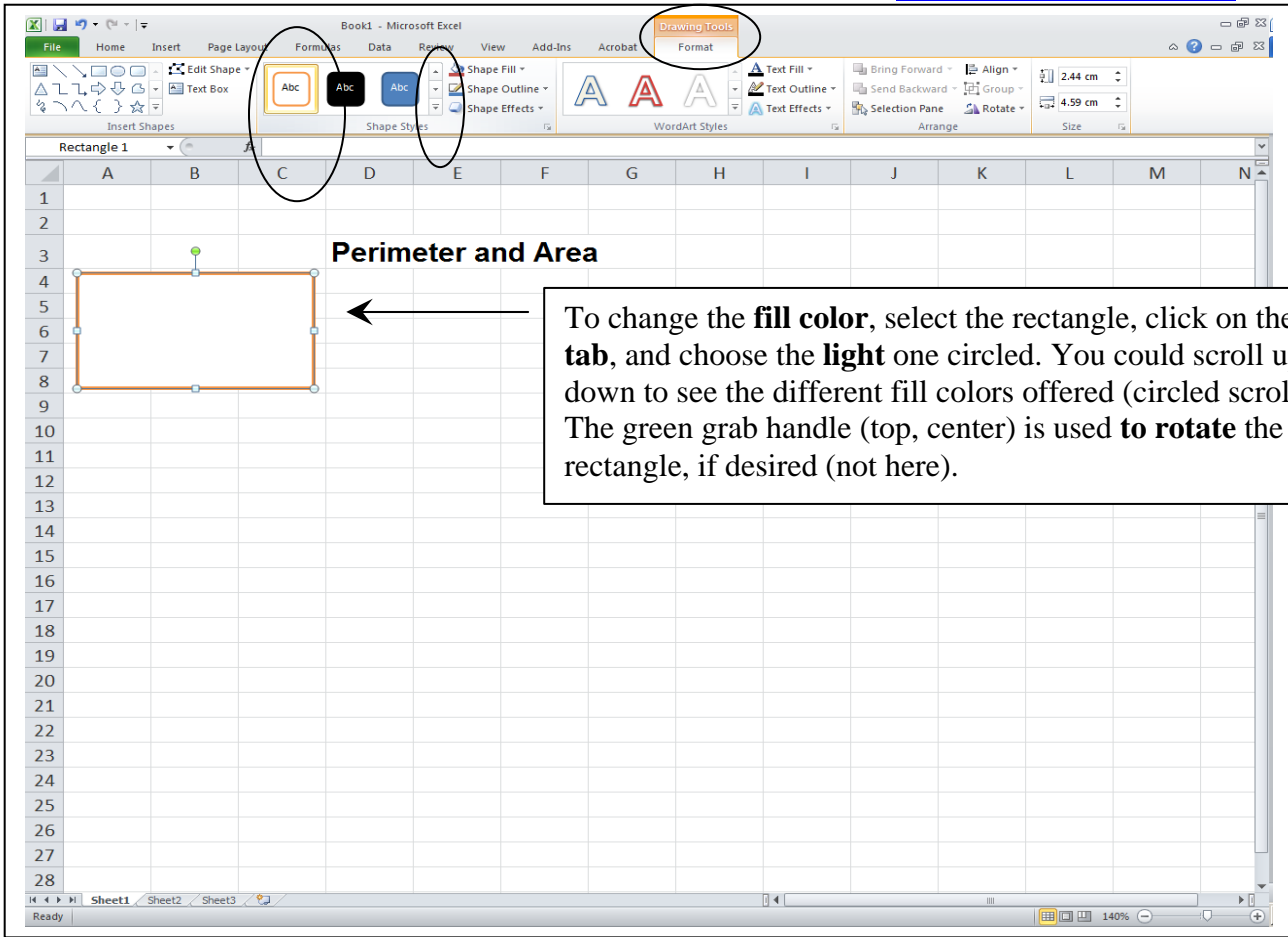
Perimeter and Area

1. Type in this phrase in cell **D3** (under the **D, 3**), and press the **Enter** key.



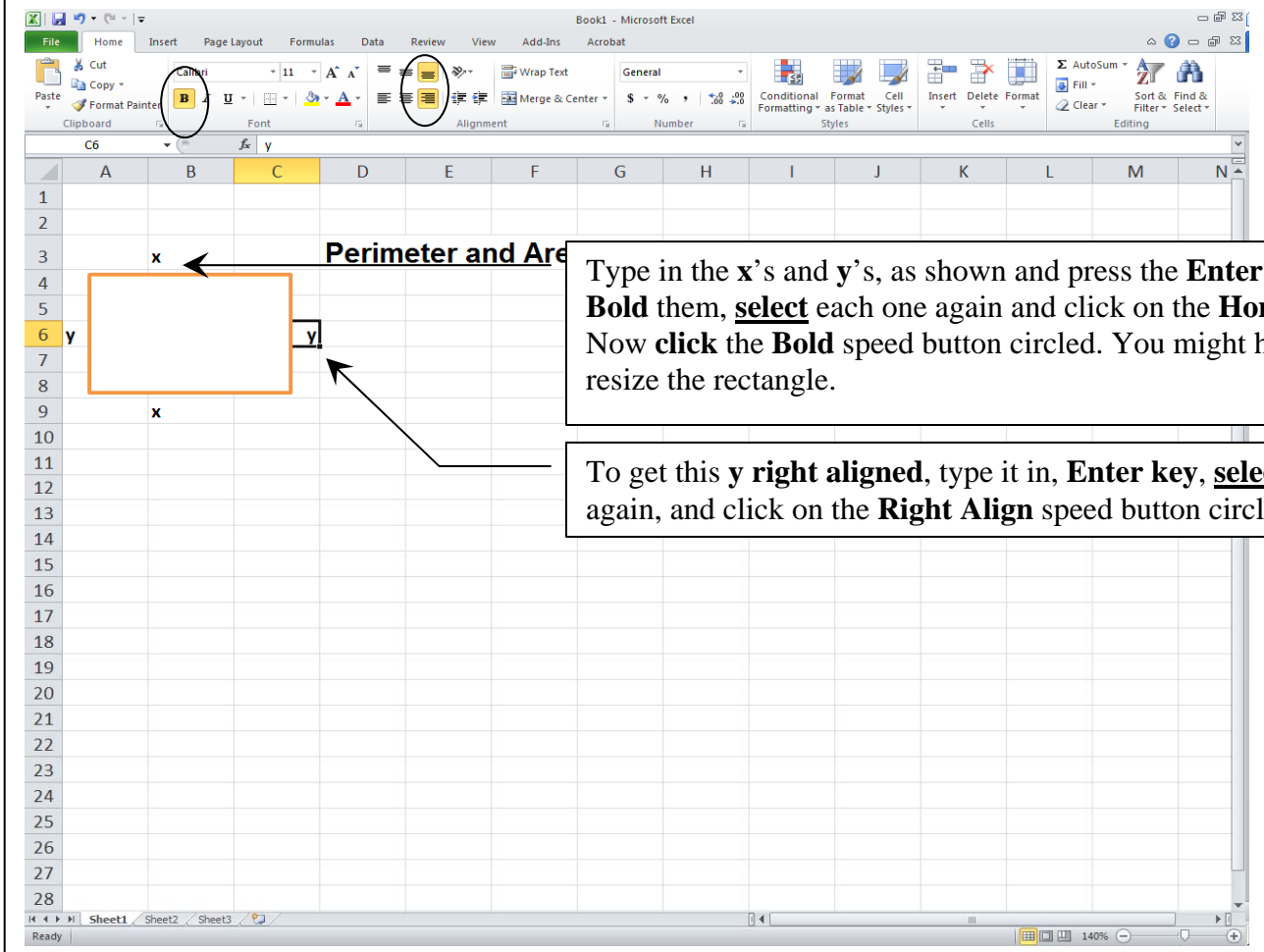
and Area

Click on the **Insert** tab, **Shapes** down arrow, **Rectangle** (circled), then **click and drag** the cross hair cursor on the spreadsheet to get the rectangle, as shown.



Perimeter and Area

To change the **fill color**, select the rectangle, click on the **Format** tab, and choose the **light** one circled. You could scroll up and down to see the different fill colors offered (circled scroll bar). The green grab handle (top, center) is used **to rotate** the rectangle, if desired (not here).



Perimeter and Area

Type in the **x's** and **y's**, as shown and press the **Enter** key. To **Bold** them, **select** each one again and click on the **Home** tab. Now **click** the **Bold** speed button circled. You might have to resize the rectangle.

To get this **y** **right aligned**, type it in, **Enter** key, **select** them again, and click on the **Right Align** speed button circled.

Perimeter and Area

Perimeter (distance around the object)
 $Perimeter = x + y + x + y = 2x + 2y = 2(x + y)$

x	y
5	1
10	2
15	3
20	4
25	5
30	6
35	7
40	8
45	9
50	10

Instructions:
 Type the titles as shown, Enter key, **select** them, **Bold** the title that starts in cell E5.
 Type in the x and y title headings and click on the **Center Alignment** speed button circled and the **Bold** speed button circled.
 To get a series automatically filled down for you, type the 1 and the 2 in the y column as shown. Press the **Enter key**, **reselect** the 1 and 2 cells (F8 and F9) as shown by clicking and dragging from the center of the top cell to the center of the second cell. Now click and drag the **bottom right corner** down until you get 10. Do this for the x column as well. This is called the **Fill Handle** (black box on the bottom right corner). When you put the cursor on it, it changes into a black cross.

Perimeter and Area

Perimeter (distance around the object)
 $Perimeter = x + y + x + y = 2x + 2y = 2(x + y)$

x	y	Perimeter
5	1	=2*(E8+F8)
10	2	=2*(E9+F9)
15	3	36
20	4	48
25	5	60
30	6	72
35	7	84
40	8	96
45	9	108
50	10	120

Instructions:
 Type in the **formulas** shown and press the **Enter key**. This will give you the **answer**. The formula will no longer show in the cell but if the cell is selected, you could see it in the Formula Bar above. Use the **Fill Handle** to fill the formula down. **Bold** all of these. Note how the **formula gets updated** when you fill it down.
 To get a **light gray fill**, select the cells shown (G8:G17), click on the **Paint Bucket** speed button circled and choose a light gray color. **Everything in gray fill in this book is a result of a formula.**

Perimeter and Area

Perimeter (distance around the object)
 $\text{Perimeter} = x + y + x + y = 2x + 2y = 2(x + y)$

x	y	Perimeter
5	1	12
10	2	24
15	3	36
20	4	48
25	5	60
30	6	72
35	7	84
40	8	96
45	9	108
50	10	120

Area = $x * y$

x	y	Area
5	1	5
10	2	20
15	3	45
20	4	80
25	5	125
30	6	180
35	7	245
40	8	320
45	9	405
50	10	500

Type in the titles, **Bold** and **Center** them. Type in the formulas; press the **Enter** key to get the answers (formulas will not show). Use the **Fill Handle** to fill the formulas down. Put the light **Gray Fill** in and **Bold** the answers.

To get ready to print click on the **Page Layout** tab (circled) and the **Page Setup More Options** button (circled) within Page Setup group.

This **dotted line** represents the **edge of your page** when you print. You could see it if you did a **File, Print, Print Preview** and returned to the spreadsheet area. The print out will eventually be **Landscape** (sideways) to help it fit on the page.

The screenshot shows the Microsoft Excel interface with the Page Setup dialog box open. The 'Orientation' section has 'Landscape' selected. The 'Scaling' section has 'Fit to: 1 page(s) wide by 1 page(s) tall' selected. A callout box points to the 'Fit to 1 page' option in the ribbon, stating: 'To get it to **Fit on 1 page** (if it is larger than one page), click on **Page tab** and then click, **Fit to 1 page** and it will shrink it to fit. Notice the dot in circle in front. Click on the **Landscape** button so that it will print out sideways. Do the Fit to 1 page for every assignment and the Landscape when you require more width.'

x	y	A
5	1	
10	2	
15	3	
20	4	
25	5	
30	6	
35	7	
40	8	
45	9	
50	10	
		320
		405
		500

The screenshot shows the Microsoft Excel interface with the Page Setup dialog box open, 'Margins' tab selected. The margins are set to Top: 1.9, Bottom: 1.9, Left: 1.8, and Right: 1.8. The 'Header' and 'Footer' are set to 0.8. The 'Center on page' section has 'Horizontally' and 'Vertically' checked. A callout box states: 'To change Margins and center the printout on the sheet, click on the **Margins tab**. Change the margins as shown.'

Another callout box states: 'To center the printout, click on **Center Horizontally and Vertically**. Do these for every assignment.'

The screenshot shows an Excel worksheet with a diagram of a rectangle labeled 'Perim' with dimensions 'x' and 'y'. The 'Page Setup' dialog box is open, with the 'Sheet' tab selected. In the 'Print' section, the 'Gridlines' and 'Row and column headings' checkboxes are checked. The 'Page order' section shows 'Down, then over' selected.

To get the **Grid Lines** and **Row and Column Headings** printed click on these check boxes on the **Sheet tab**. Also do these for every assignment.

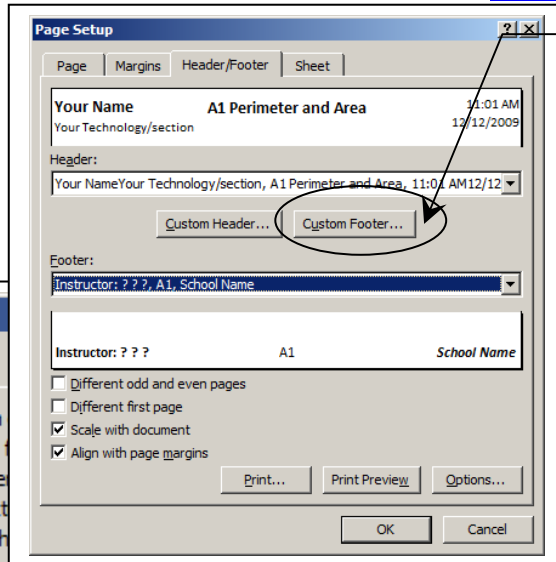
This close-up shows the 'Header/Footer' tab of the 'Page Setup' dialog box. The 'Custom Header...' button is circled in red. The header text 'Your Name A1 Perimeter and Area' and 'Your Technology/section' is visible.

To get Headers and Footers on your printout click on the **Header/Footer tab**, **Custom Header** and fill out the **Left, Center, and Right Headers** as shown. Click on the **A** button to get the Center Header **Bold, 14 (and your name)**. Click on the **Table Calendar** button to get the **Date**, Enter, Click on the **Time clock** button to get the **Time**. The date and time will be shown when you print. OK. **Do this for every assignment.**

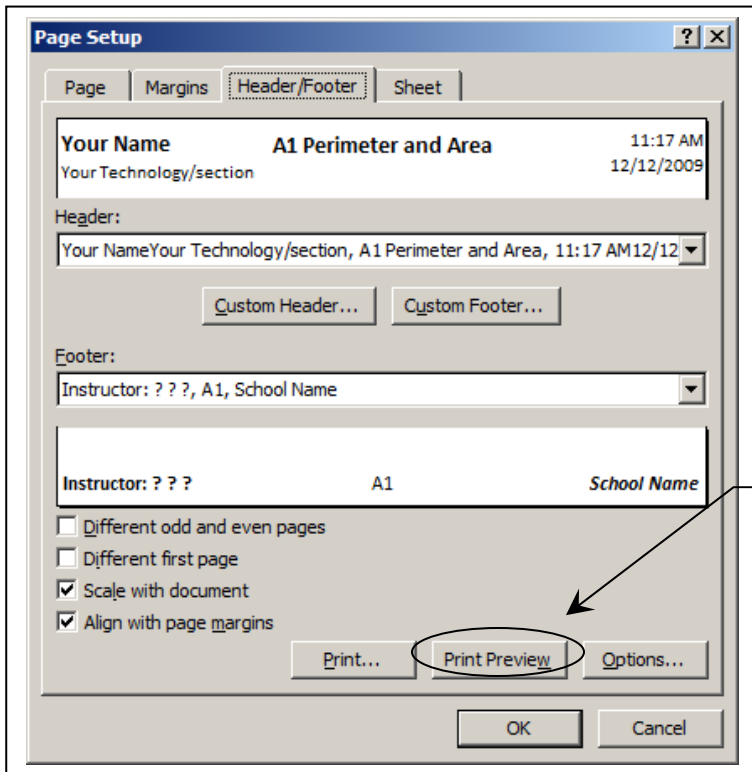
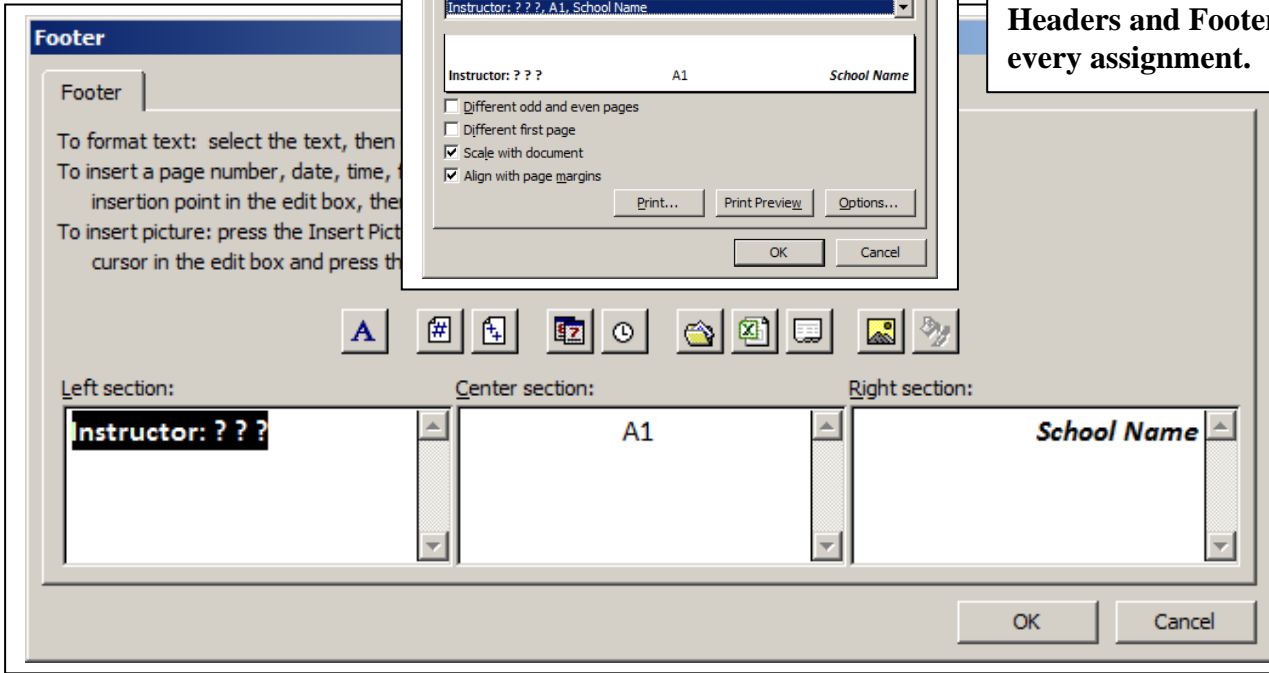
The 'Header' dialog box is shown with three sections:

- Left section:** Contains 'Your Name' in bold and 'Your Technology/section'.
- Center section:** Contains 'A1 Perimeter and Area' in bold.
- Right section:** Contains '&[Time]' and '&[Date]'.

 The 'Format Text' button (A) and 'Table Calendar' button (clock) are circled in red. The 'OK' and 'Cancel' buttons are at the bottom.



To get Footers click on the **Custom Footer button** and fill out the **Left, Center, and Right Footers** as shown. The left footer is **Bold, 12** and the right footer is **Bold-Italics, 12**. Use the **A** font button. **OK. Do Headers and Footers for every assignment.**



To see a **Print Preview** before you print, click on **Print Preview button**.

Your Name _____ **A1 Perimeter and Area**

To change to **Landscape** (sideways) click on Portrait Orientation and then select **Landscape**. To enlarge, click on the button in bottom right corner below. You can use the scroll bar to move around. To return to the spreadsheet itself, click on the **Home** tab (circled up top).

	A	B	C	D	E	F	G	H	I	J
1										
2										
3		x								
4										
5										
6	y									
7										
8										
9		x								
10										
11										
12										
13										
14										
15										
16										
17										

Instructor: ??? A1

To Close the Print Preview, click on the **Home** tab circled.

Your Name _____ **A1 Perimeter and Area**
Your Technology/section _____

	A	B	C	D	E	F	G	H	I	J
1										
2										
3		x								
4										
5										
6	y									
7										
8										
9		x								
10										
11										
12										
13										
14										
15										
16										
17										

Instructor: ??? A1

To print click on the **File** tab, **Print**. It will look like the Print Preview shown.

x	y	Perimeter	Area
5	1	12	5
10	2	24	10
15	3	36	15
20	4	48	20
25	5	60	25
30	6	72	30
35	7	84	35
40	8	96	40
45	9	108	45
50	10	120	50

To turn the **Formulas on** click on the **Formulas** tab, **Show Formulas**. This doubles the width of each column, some of which you will have to reduce manually. This also cuts off the headings (this is OK). In the future (but not now) to turn **Formulas off**, click on it again. In the bottom right corner you can click on the + button to **Zoom in**.

x	y	Perimeter	Area
5	1	=2*(E8+F8)	5
10	2	=2*(E9+F9)	10
15	3	=2*(E10+F10)	15
20	4	=2*(E11+F11)	20
25	5	=2*(E12+F12)	25
30	6	=2*(E13+F13)	30
35	7	=2*(E14+F14)	
40	8	=2*(E15+F15)	
45	9	=2*(E16+F16)	
50	10	=2*(E17+F17)	

Book1 - Microsoft Excel

File Home Insert Page Layout Formulas Data Review View Add-Ins Acrobat

Function Library: Insert Function, AutoSum, Recently Used, Financial, Logical, Text, Date & Time, Lookup & Reference, Math, More Functions, Name Manager, Define Name, Use in Formula, Create from Selection, Defined Names, Trace Precedents, Trace Dependents, Remove Arrows, Show Formulas, Error Checking, Evaluate Formula, Watch Window, Calculation Options, Calculate Now, Calculate Sheet

		Perimeter (dis			Area = x * y		
Perimeter = x							
	x	y	Perimeter	x	y	Area	
5	5	1	=2*(E8+F8)	5	1	=J8*K8	
10	10	2	=2*(E9+F9)	10	2	=J9*K9	
15	15	3	=2*(E10+F10)	15	3	=J10*K10	
20	20	4	=2*(E11+F11)	20	4	=J11*K11	
25	25	5	=2*(E12+F12)	25	5	=J12*K12	
30	30	6	=2*(E13+F13)	30	6	=J13*K13	
35	35	7	=2*(E14+F14)	35	7	=J14*K14	
40	40	8	=2*(E15+F15)	40	8	=J15*K15	
45	45	9	=2*(E16+F16)	45	9	=J16*K16	
50	50	10	=2*(E17+F17)	50	10	=J17*K17	

Notice that Titles get cut off and that the formatting has been changed when you **Show Formulas**. This is OK as all we want to see on this page are the formulas. **All of the formatting can be seen on your "answer" printout.** You can **reduce column width** by clicking and dragging the column dividers to the left (circled). Everything in gray shade is a formula.

Notice that Titles get cut off and that the formatting has been changed when you **Show Formulas**. This is OK as all we want to see on this page are the formulas. **All of the formatting can be seen on your "answer" printout.** You can **reduce column width** by clicking and dragging the column dividers to the left (circled). Everything in gray shade is a formula.

Book1 - Microsoft Excel

File Home Insert Page Layout Formulas Data Review View Add-Ins Acrobat

Print

Copies: 1

Printer: Adobe PDF Ready

Settings

- Print Active Sheets: Only print the active sheets
- Pages: 1 to 1
- Collated: 1,2,3 1,2,3 1,2,3
- Landscape Orientation
- Letter: 21.59 cm x 27.94 cm
- Last Custom Margins Setting: Left: 1.8 cm Right: 1.8 cm
- Fit Sheet on One Page: Shrink the printout so that it fits on one page

Page Setup

Your Name: Your Technology Section

A1 Perimeter and Area

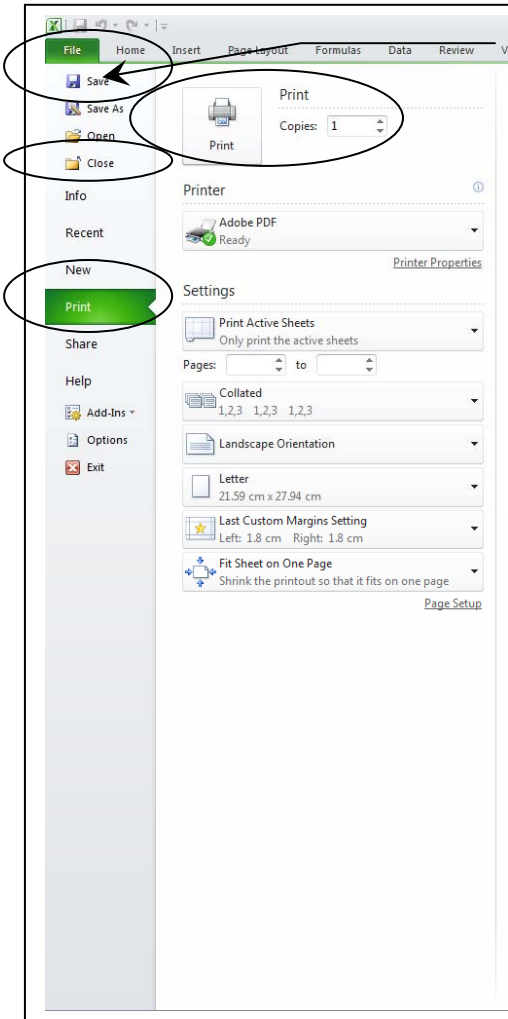
11:43 AM 12/12/2009

		Perimeter (dis			Area = x * y		
Perimeter = x							
	x	y	Perimeter	x	y	Area	
5	5	1	=2*(E8+F8)	5	1	=J8*K8	
10	10	2	=2*(E9+F9)	10	2	=J9*K9	
15	15	3	=2*(E10+F10)	15	3	=J10*K10	
20	20	4	=2*(E11+F11)	20	4	=J11*K11	
25	25	5	=2*(E12+F12)	25	5	=J12*K12	
30	30	6	=2*(E13+F13)	30	6	=J13*K13	
35	35	7	=2*(E14+F14)	35	7	=J14*K14	
40	40	8	=2*(E15+F15)	40	8	=J15*K15	
45	45	9	=2*(E16+F16)	45	9	=J16*K16	
50	50	10	=2*(E17+F17)	50	10	=J17*K17	

Instructor: ??? A1 School Name

1 of 1

Click on **File tab, Print**, to see the **Print Preview**. This is to ensure that it fits on one page before you print. Notice number of pages on the lower left (circled). If this says 1 of 2, then you need to **"Fit to 1 page"**.



To print, click on the **File**, tab, **Print**. To save the file, click on **File** tab, **Save As**. Save it as **A1 Perimeter and Area** by **Your Name** in your account or memory stick as directed by your instructor. When you are **finished**, to close the file, click on **File** tab, **Close**.

This ends Assignment 1.

Your Name: _____ A1 Perimeter and Area 1:13 PM 12/12/2009
 Your Technology/section: _____

	A	B	C	D	E	F	G	H	I	J	K	L
1												
2												
3												
4												
5		x										
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												

Instructor: ??? A1 School Name