Excel: Intro, Mean, Median, Mode
CS-150L
Computing for Business Students
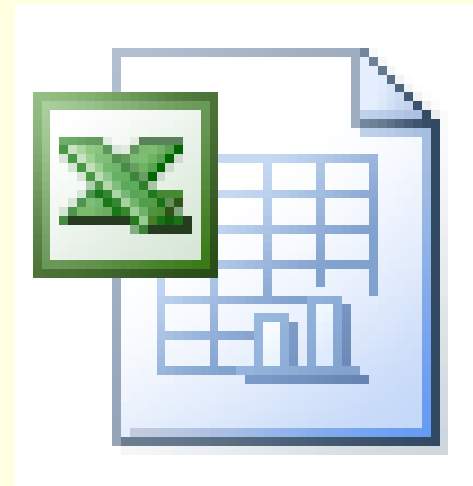
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6/21/2010

Paper Spreadsheets

	Bob		Fred		Dean		Total	
	Sales	MTD	Sales	MTD	Sales	MTD	Sales	MTD
1-Jan	1234	1234	2344	2344	3973	3973	7551	7551
2-Jan	2134	3368	1580	3924	2025	5998	5739	13290
3-Jan	2321	5689	1025	4949	1898	7896	5244	18534
4-Jan	2314	8003	2671	7620	3015	10911	8000	26534
5-Jan	3212	11215	1901	9521	3271		8384	34918
6-Jan	232	11447	2563	12084		554	6467	41386
7-Jan	3232	14679	1535		2660	20514	7426	48812
8-Jan	2342	17021		050	1610	22125	7183	55995
9-Jan	2323	19340	2975	1982			04	64299
10-Jan	2342	21686	2388	222			52	72561
11-Jan								

- The word "spreadsheet" came to mean the format used to present book-keeping ledgers:
  - Columns for categories of expenditures across the top,
  - Invoices listed down the left margin,
  - The amount of each payment in the cell where its row and column intersect.
- Traditionally, these were "spread" across facing pages of a bound ledger (book for keeping accounting records) or on oversized sheets of paper ruled into rows and columns in that format and approximately twice as wide as ordinary paper.

Computer Spreadsheets

- Simulates a paper spreadsheet.

- Displays multiple cells that together make up a grid consisting of rows and columns, each cell containing either alphanumeric text or numeric values.

- Cell may alternatively contain a formula that defines how the contents of that cell is to be calculated from the contents of any other cell (or combination of cells) each time any cell is updated.

- Frequently used for financial information because of their ability to re-calculate the entire sheet automatically after a change to a single cell is made.

History of Computer Spreadsheets

- In 1971, Rene K. Pardo and Remy Landau filed a patent on a spreadsheet related algorithm.

- Visicalc is usually considered the first electronic spreadsheet, and it helped turn the Apple II computer into a success and greatly assisted in their widespread application.

- Lotus 1-2-3 was the leading spreadsheet of DOS era.

- Excel is now generally considered to have the largest market share.

Excel

- Microsoft Excel is a spreadsheet application written and distributed by Microsoft for Microsoft Windows and Mac OS X.

- It features calculation, graphing tools, pivot tables and, except for Excel 2008 for Mac OS X, a macro programming language called VBA (Visual Basic for Applications).

- It is overwhelmingly the dominant spreadsheet application available for these platforms and has been so since version 5 in 1993.

Microsoft® Office Excel. 2007

- Saying your software is the best in the world "because more people use" it is like saying McDonalds makes the best food in the world.

--unknown author

Welcome To Excel

Excel: Rows, Columns, and Cells

	A	B	C	D	E	F
1	Date	Check #	Transaction Description	Credit	Debit	Balance
2	8/3/08	194	Share Draft		$ 68.00	$ 1,324.56
3	8/3/08	195	Share Draft		$ 124.00	$ 1,200.56
4	8/8/08	197	Share Draft		$ 301.11	$ 899.45
5	8/10/08	196	Share Draft		$ 25.00	$ 874.45
6	8/13/08		WITHDRAW ATM		$ 100.00	$ 774.45
7	8/15/08	193	Share Draft		$ 502.00	$ 272.45
8	8/15/08		Merrill Lynch Electronic Payroll	$5,318.00		$ 5,590.45
9	8/27/08		CHASE VISA Bill Pay		$3,327.33	$ 2,263.12
10	8/29/08	198	Share Draft		$ 27.50	$ 2,235.62
11	8/30/08		National City Mortgage Bill Pay		$2,212.27	$ 23.35
12	8/31/08		Merrill Lynch Electronic Payroll	$5,318.00		$ 5,341.35
13	8/31/08		DIVIDEND	$ 4.26		$ 5,345.61

- ***Column F*** contains the checking account balance.
- ***Row 4*** contains a share draft transaction on 8/8/08
- ***Cell D8*** contains the ***value*** of a payroll deposit.

Credit, Debit, and Balance

	A	B	C	D	E	F
1	Date	Check #	Transaction Description	Credit	Debit	Balance
2	8/3/08	194	Share Draft		$ 68.00	$ 1,324.56
3	8/3/08	195	Share Draft		$ 124.00	$ 1,200.56
4	8/8/08	197	Share Draft		$ 301.11	$ 899.45
5	8/10/08	196	Share Draft		$ 25.00	$ 874.45
6	8/13/08		WITHDRAW ATM		$ 100.00	$ 774.45
7	8/15/08	193	Share Draft		$ 502.00	$ 272.45
8	8/15/08		Merrill Lynch Electronic Payroll	$5,318.00		$ 5,590.45

- The above layout is used by the New Mexico Educator's Federal Credit Union.

- Keeping the debits and credits in separate columns allows each to be added up independently so that the total debits and credits can be calculated

- The smaller of the two totals is then subtracted from the larger to get the account balance.

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Credit?, Debit?: Look to the Balance

	A	B	C	D	E	F
1	Date	Check #	Transaction Description	Credit	Debit	Balance
2	8/3/08	194	Share Draft		$ 68.00	$ 1,324.56
3	8/3/08	195	Share Draft		$ 124.00	$ 1,200.56
4	8/8/08	197	Share Draft		$ 301.11	$ 899.45
5	8/10/08	196	Share Draft		$ 25.00	$ 874.45
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7	8/15/08	193	Share Draft		$ 502.00	$ 272.45
8	8/15/08		Merrill Lynch Electronic Payroll	$5,318.00		$ 5,590.45

Debits and credits are a system of notation used to keep track of money movements (transactions) into and out of an account:

- Money paid into an account is a *debit*,

- Money taken out of an account is a *credit*.

- From your perspective, when you pay money into your bank account it is recorded as a debit, your bank account is in debt to you - the bank owes you money.

- From the bank's perspective, when you pay money into the bank it has come out of your account (a credit) into their vault: your account is in credit - your account is owed money.

Quiz: Excel Cell Value

	A	B	C	D	E	F	G
1		2004		2005		2006	
2		Total Revenue	Total Operating Expenses	Total Revenue	Total Operating Expenses	Total Revenue	Total Operating Expenses
3	Active Imagination	$120,000	$60,000	$180,000	$126,000	$351,000	$280,800
4	Gopher Games	$96,000	$67,200	$134,400	$80,640	$228,480	$91,392
5	The Complete Strategist	$333,000	$233,100	$432,900	$294,372	$649,350	$467,532

What is the *value* in cell C4?

a) $67,200
b) Total Operating Expenses
c) Gopher Games
d) Black numbers with a white background.
e) 2005 Total Operating Expenses for Gopher Games.

Excel Functions and Arguments

Build-in Excel functions accept input (also called *arguments* or *parameters*) and *return a value*.

- =SUM (4, 3, 10)

  - Here, the function SUM, has three *arguments*: 4,3 and 10. The function *returns* the value 17.

- =PRODUCT (A1:A5)

  - Here, the function PRODUCT, has one *argument*: A1:A5. This argument specifies the cells A1, A2, A3, A4 and A5. The function *returns* the product of the values in those five cells.

Excel Formula

A ***formula*** in a spreadsheet, such as Excel, is a mathematical equation used to calculate a value.

In Excel, formulas must begin with an equal (=) sign.

=AVERAGE (4, 3, 10)

Function

Arguments that are Constants

=AVERAGE(A1, B5) * 3

Constant

Operator

Arguments that are Cell References:
    A1: Column A, Row 1
    B5: Column B, Row 5
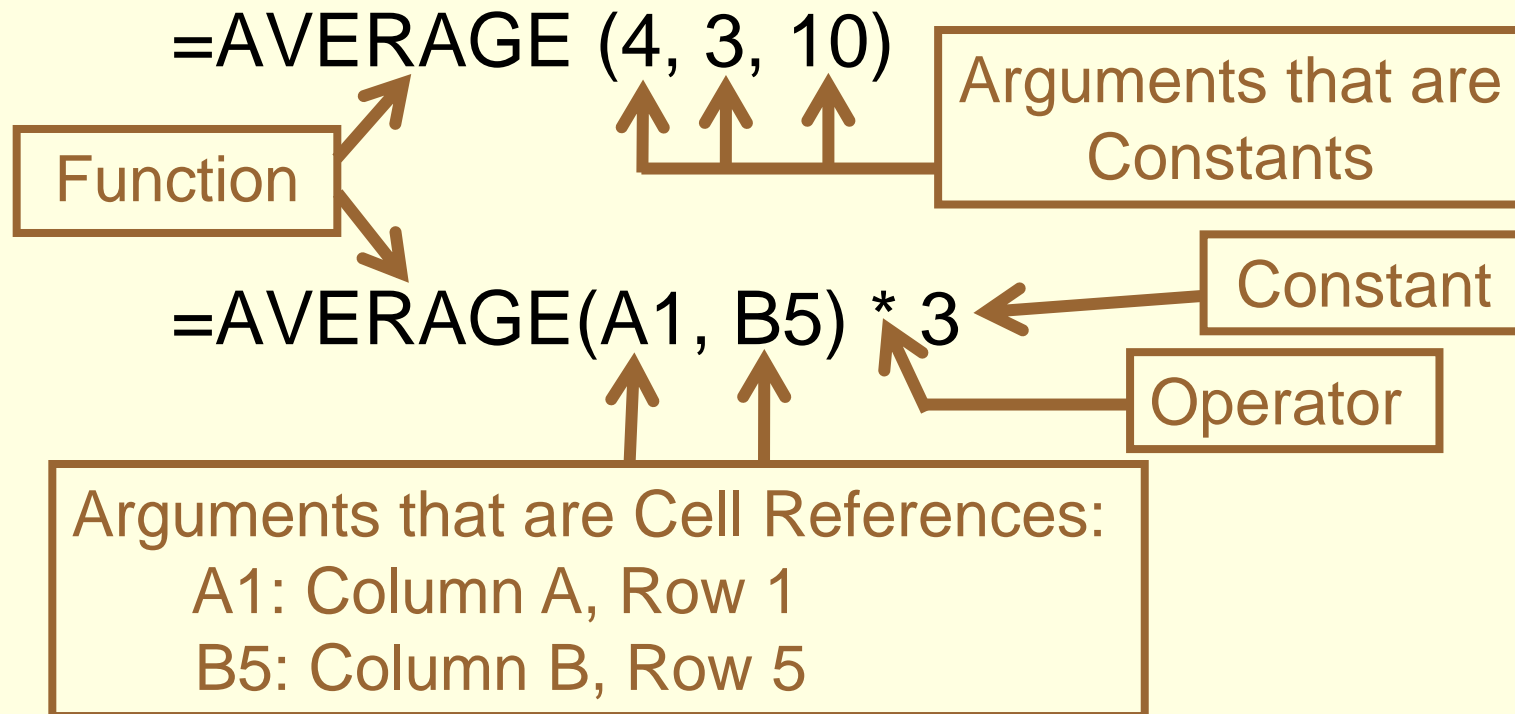
Excel Operators

An ***operator*** in Excel is a symbol that represents an arithmetic operation in a spreadsheet formula. The most operators used in CS-150 are:

- addition (+)   = 6 + 3 has a value of 9
- division (/)   = 6 / 3 has a value of 2
- subtraction (-)   = 6 - 3 has a value of 3
- multiplication (*)   = 6 * 3 has a value of 18
- exponentiation (^)   = 6 ^ 3 has a value of

6 * 6 * 6 or 216

Read "*six raised to the third power*"

or "*six to the power of three*".

Excel Addition

=SUM (4, 3, 10)

Function that returns the sum of the three arguments (value is17).

=4+3+10

Equation or *Formula* that calculates the sum of the three numbers (value is17).

=SUM(4+3+10)

First: The three numbers are added.
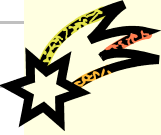
Second: The function SUM is given the single argument 17.

This is ***redundant***

SUM: Using Cell Ranges

	A	B
1	Bussniss Expense Report for September 2008	
2	ipod nano	$ 57.00
3	Almost Rad Wolf Complete -7.75"x30"	$ 94.99
4	iTunes downloads	$ 27.00
5	Cell phone bill	$195.00
6		
7	Total	=sum(B2:B5)
8		

Square brackets, [ ], indicate that the argument is optional.

SUM(*number1* [,*number2*] [,*number3*] [,...])

SUM(*cellRef1*:*cellRef2*)

SUM – Across and Rectangles

	A	B
1	50	12
2	25	17
3	10	15
4	5	18

SUM(cellRef1:cellRef2)

Can be used for a range in

- a column: SUM(B1:B4) = 90

- a row, or : SUM(A1:B1) = 62

- a rectangle: SUM(A1:B4) = 152

Quiz: Excel SUM Function

Which of the following will find the sum of the 4 numbers shown in column A, rows 1 through 4?

	A	B
1	50	12
2	25	17
3	10	15
4	5	18

a) = sum(50-5)

b) = sum(1A-4A)

c) = sum(1A:4A)

d) = sum(A1:A4)

e) = sum(A1-B4)

Errors

Sometimes Excel can't calculate a formula because the formula contains an error.

If that happens, you'll see an error value instead of a result in a cell. Here are three common error values:

- **#####** Column not wide enough to display the contents of this cell.
    - Increase column width,
    - shrink the contents to fit the column, or
    - apply a different number format.

- **#REF!**   A cell reference is not valid. Cells may have been deleted.

- **#NAME?**   You may have misspelled a function name or used a name that Excel does not recognize.

- Cells with error values such as #NAME? may display a red triangle. If you click the cell, an error button appears to give you some error correction options.

Save as Excel 97-2003 Workbook .xls

Microsoft Office Excel - Compatibility Checker ? ✕

The following features in this workbook are not supported by earlier versions of Excel. These features may be lost or degraded when you save this workbook in an earlier file format. Click Continue to save the workbook anyway. To keep all of your features, click Cancel, and then save the file in one of the new file formats.

Summary   Number of occurrences

Minor loss of fidelity

Some cells or styles in this workbook contain formatting that is not supported by the   1
selected file format. These formats will be converted to the closest format available.   Help

Not an Error message

☑ Check compatibility when saving this workbook.

| Copy to New Sheet | | Continue | Cancel |

"Reading" a Spreadsheet

	A	B	C	D	E	F	G
1		Salary:	$	12.50			Project
2	Project	Mon	Tue	Wed	Thu	Fri	Total Hours
3	CloudSat	2	8	4	8	1	
4	STPSAT	2		4		1	
5	Coriolis	2				1	
6	WindSat	2				1	
7	XS-11	2			1	1	
8	Total Hours						
9	Pay Per Day						

What equation should be placed in cell B8?

From the context of this spreadsheet, cell B8 should be the total hours worked on Monday.

Thus, cell B8 **= SUM(B3:B7)**

Merged Cells: C1 and D1

1) Select Cells **C1** and **D1**.
2) Right-click and select: "**Format Cells...**"
3) Select the "**Alignment**" tab of Format Cells dialog.
4) Select the "**Merge Cells**" Check box.

	A	B	C	D
1		Salary:	$	12.50
2	Project	Mon	Tue	Wed
3	CloudSat	2	8	4
4	STPSAT	2		4

The value of cell C1 is 12.50: *ok, good*

However, the value of cell D1 is 0!

Format Cells: Alignment Tab

Select **Cells...** option from the **Format** Menu.

- Center (Hor & Vert)
- Wrap Text
- Merge Cells

Format Cells   ? ✕

| Number | Alignment | Font | Border | Patterns | Protection |

Text alignment

Horizontal:
[Center ▼]   Indent: [0 ▲▼]

Vertical:
[Center ▼]

☐ Justify distributed

Text control
☑ Wrap text
☐ Shrink to fit
☑ Merge cells
Right-to-left

Text direction:
[Context ▼]

Orientation

T e x t   Text

[0 ▲▼] Degrees

OK   Cancel

	A	B
1	Bussniss Expense Report	
2	ipod nano	$ 57.00
3	Almost Rad Wolf Complete	$ 94.99
4	iTunes downloads	$ 27.00
5	Cell phone bill	$195.00
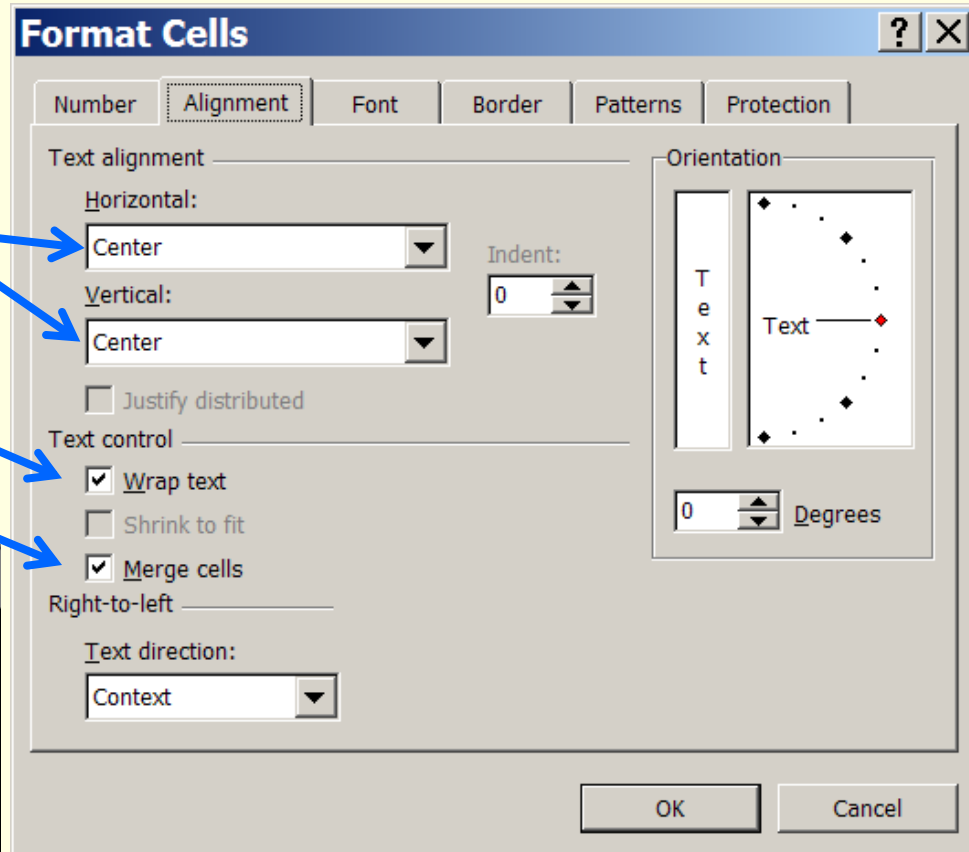
Format Cells: Orientation & Wrap Text

Text Alignment
- Horizontal: Center
- Vertical: Bottom

Format Cells ? X

| Number | Alignment | Font | Border | Patterns | Protection |

Text alignment

Horizontal:
Center

Indent:
0

Vertical:
Bottom

☐ Justify distributed

Text control
☑ Wrap text
☐ Shrink to fit
☐ Merge cells

Right-to-left

Text direction:
Context

Orientation

T e x t

Text

90 Degrees

Wrap Text:
- Unchecked &
- Checked
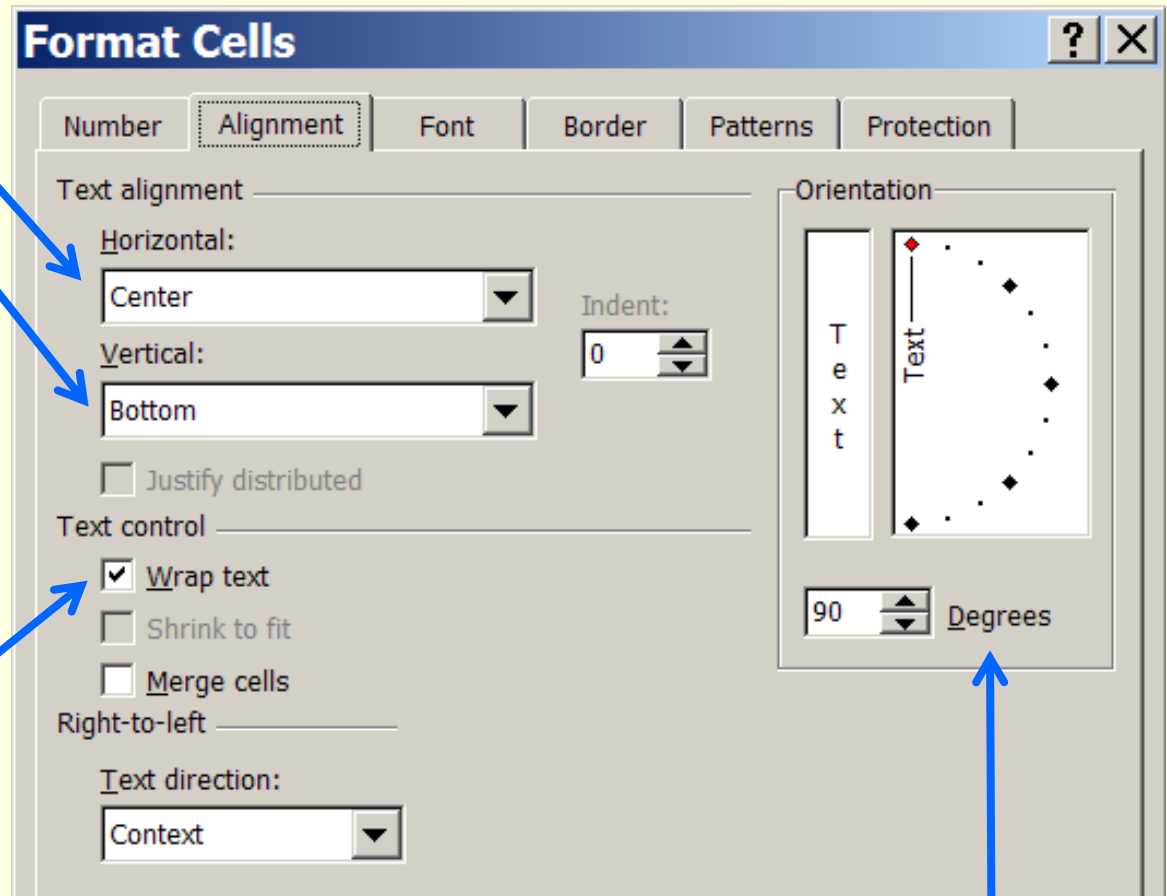
Orientation: 90 degrees

Quiz: Excel Reading a Spreadsheet

	A	B	C	D	E	F	G
1		Salary:	$	12.50			Project Total Hours
2	Project	Mon	Tue	Wed	Thu	Fri	
3	CloudSat	2	8	4	8	1	
4	STPSAT	2		4		1	
5	Coriolis	2				1	
6	WindSat	2				1	
7	XS-11	2			1	1	
8	Total Hours						
9	Pay Per Day						

Which is the best formula to enter in cell G3?

a) =sum(B3:F3)   d) =2 + 8 + 4 + 8 + 1

b) =sum(B3:F7)   e) =25

c) =sum(B3:B7)

Quiz: Excel Evaluate

	A	B	C	D	E	F	G
1		Salary:	$	12.50			Project Total Hours
2	Project	Mon	Tue	Wed	Thu	Fri	
3	CloudSat	2	8	4	8	1	
4	STPSAT	2		4		1	
5	Coriolis	2				1	
6	WindSat	2				1	
7	XS-11	2			1	1	
8	Total Hours						
9	Pay Per Day						

What is the value of =D1*B3?

a) 0   d) 25.00

b) 24   e) 14.50

c) 24.50

A1 - (B1 + C1)

- A1 - (B1 - C1)

Quiz: CS-150 Exam 1 Results

Which is true about the CS-150 exam results from last week?

More students received a 0 than any other grade.

b) More students received an A than any other grade.

d) Most students did not receive an A on the exam.

c) The class average is 85%

a) The class average is 78%

The class median grade was 87%

e) All of the above.

AVERAGE()

■ AVERAGE(): Returns the arithmetic mean of the arguments. This equals the sum of the arguments divided by the number of arguments.

$$mean = \frac{\sum_{i=1}^{n} x_i}{n}$$

	A	B	C	D	E	F
1	First Name	Last Name	Grade	Grade Points		
2	Dara	Wood	98	4		
3	Rowan	Wood	95	4		
4	Leilen	Wood	97	4		
5	Tyal	Smith	0	0		
6	Tor	Anderson	94	4		
7	Tam	Lee	0	0		
8		Mean	=AVERAGE(C2:C7)			
9			AVERAGE(**number1**, [number2], ...)			

MEDIAN()

- MEDIAN() sorts the values from lowest to highest.

  - If there is an **odd** number of cells, then this function returns the middle number.

  - If there is an **even** number of cells, then this function returns the mean of the two middle numbers.

98 97 95 94 0 0

94.5

	A First Name	B Last Name	C Grade	D Grade Points
1				
2	Dara	Wood	98	4
3	Rowan	Wood	95	4
4	Leilen	Wood	97	4
5	Tyal	Smith	0	0
6	Tor	Anderson	94	4
7	Tam	Lee	0	0
8		Mean	64.0	2.7
9		Median	94.5	4.0

MODE()

MODE() returns the value that has the highest number of occurrences.

- =MODE(1, 2, 2, 6, 7) = 2
- =MODE(1, 2, 6, 7) = #N/A
- =MODE(1, 2, 2, 6, 7) = 2
- =MODE(1, 2, 2, 6, 6) = 2
- =MODE(1, 6, 2, 2, 6) = 6

	B	C	D
1	Last Name	Grade	Grade Points
2	Wood	98	4
3	Wood	95	4
4	Wood	97	4
5	Smith	0	0
6	Anderson	94	4
7	Lee	0	0
8	Mean	64.0	2.7
9	Median	94.5	4.0
10	Mode	0.0	4.0

When using MODE(), it is important to have many more **data points** than **bins**.

What is the Correct Average?

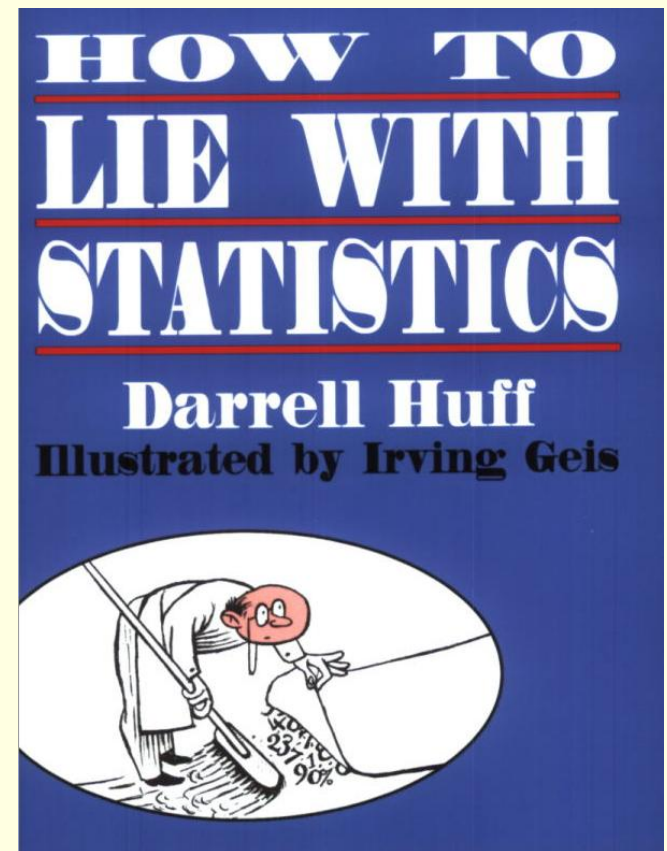Two students take a test. One scores 100% the other scores 0%. What is the mean?

- (100% + 0%)/2 = 50%

  (A + F)/2 = F

- (4.0 + 0.0)/2 = 2.0

  (A + F)/2 = C

  A "*must read*" book by Darrell Huff for all Business students.

HOW TO LIE WITH STATISTICS

Darrell Huff
Illustrated by Irving Geis

Quiz: Median

	A	B	C	D	E	F	G	H	I
1	3	1	0	3	4	1	3	2	2

In Excel, what is the value of =MEDIAN(A1:I1)?

a) 2

b) 2.1111

c) 2.5

d) 3

e) 4

Median - Solution

	A	B	C	D	E	F	G	H	I
1	3	1	0	3	4	1	3	2	2

In Excel, what is the value of =MEDIAN(A1:I1)?

| 4 | 3 | 3 | 3 | | 2 | | 2 | 1 | 1 | 0 |

Sort the numbers.

The Median is the number in the middle

Quiz: Mode

	A	B	C	D	E	F	G	H	I
1	3	1	0	3	4	1	3	2	2

In Excel, what is the value of =MODE(A1:I1)?

a) 2

b) 2.1111

c) 2.5

d) 3

e) 4

Order of Operations

In Excel, what is the value of each of the following?

1.	=3+2*10/5	1.	7
2.	=(3+2)*10/5	2.	10
3.	=3+(2*10)/5	3.	7
4.	=3+2*(10/5)	4.	7
5.	=(3+2*10/5)	5.	7
6.	=((3+(2*10)/5))	6.	7

Order of Operations Example 2

In Excel, what is the value of each of the following?

1.	=1+2+3*4+5	1.	20
2.	=(1+2)+3*4+5	2.	20
3.	=(1+2+3)*4+5	3.	29
4.	=1+2+3/3+1	4.	5
5.	=(1+2+3)/(3+1)	5.	1.5
6.	= (1+2+3)/3+1	6.	3

Quiz: Order of Operations

In Excel, what is the value of the formula:

=(2*3) + 2+3*5

a) 31

b) 30

c) 27

d) 25

e) 23

Decimal Place Format

- Numbers entered in a *logical column* must have the decimal places lined up.

- Numbers entered in a *logical column* must have the same number of decimal places.

	A	B	C	D	E
1	Bad	Bad	Good	Good	Good
2	23	23	23	23.0	23.00
3	123.433	123.433	123	123.4	123.43
4	75	75	75	75.0	75.00
5	324.4	324.4	324	324.4	324.40
6	55.25	55.25	55	55.3	55.25

Percentage

- In Excel, when you enter a value as a percent, then that is the percentage you get:
  - Enter 5% and you get 5%.

- ***When you enter a number without the percent symbol***, %, and later convert the value to a percentage, then Excel multiplies the value by 100.
  - Enter 1, you get 100%
  - Enter 0.5, you get 50%
  - Enter 25 you get 2500%
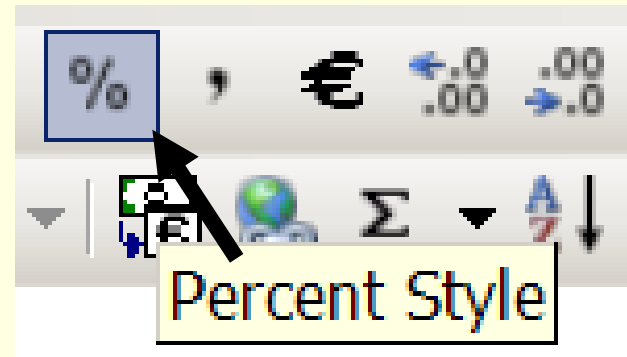
Percentage Calculation

	A	B	C
1	Bussniss Expense Report		
2	Item	Charge	Credit Card Bonus
3			1.00%
4	ipod nano	$ 57.00	=B4*$C$3
5	Almost Rad Wolf Complete	$ 94.99	$0.95
6	iTunes downloads	$ 27.00	$0.27
7	Cell phone bill	$195.00	$1.95
8			
9	Total	$373.99	$3.74

In order to the equation fill down, the **Charge** must be entered as a **relative address** and the **Credit Card Bonus** percentage must be entered as an **absolute address**.

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Relative and Absolute Reference

A1   Relative Reference

$A$1 Absolute Reference

Weighted Mean

$$= \frac{\sum_{i=1}^{n} w_i x_i}{\sum_{i=1}^{n} w_i}$$

n = 3
w_1 = Quantity of Caffé Latte
x_1 = Cost of Caffé Latte
w_2 = Quantity of Caffé Mocha
x_2 = Cost of Caffé Mocha

	A	B	C
1	Item	Quantity Sold	Unit Cost
2	Caffé Latte	10	$ 2.55
3	Caffé Mocha	10	$ 2.75
4	Espresso	100	$ 1.45
5		Average Sale	$ 1.65
6	=(C2*B2 + C3*B3 + C4*B4)/SUM(B2:B4)		

Mean: When Total Weight = 100%

$$= \frac{\sum\limits_{i=1}^{n} w_i x_i}{\sum\limits_{i=1}^{n} w_i} = \sum\limits_{i=1}^{n} p_i x_i$$

There is a *special case* when the **weights are percentages of a whole**. Then the weights must sum to 100% Thus, there is no need to divide by the total weight. Why?

	A	B	C
1	Company	Share Price Change	Shares in Portfolio
2	Hasbro	$3.00	25%
3	Fisher-Price	$1.00	25%
4	Marvel	($2.00)	50%
5	Average gain (loss) per share		0.00
6	=B2*C2+B3*C3+B4*C4		

Equation Terms: Fraction Parts

$$= \frac{\sum\limits_{i=1}^{n} w_i x_i}{\sum\limits_{i=1}^{n} w_i}$$

Numerator

Denominator

$$= \frac{\sum_{i=1}^{n} w_i x_i}{\sum_{i=1}^{n} w_i}$$

Subscripts

Summation

Weighted Mean: What is Wrong?

	A	B	C	D	E
1	Name		Project 1	Project 2	Class
2		Weight	30	60	Grade
3	Peter		95	75	81.7
4	Paul		75	95	46.8
5	Marry		99	98	52.1
6					
7	Equ in Cell E3: =(C3*$C$2+D3*$D$2)/SUM(C2:D2)				

Cell E3 has the correct answer, but the total weight, SUM(C2:D2) are relative references. Thus, the equation fills down with the total weight use for Paul as SUM(C3:D3): very bad.

Weighted Mean: What is Wrong? #2

	A	B	C	D	E
1	Name		Project 1	Project 2	Class
2		Weight	30	60	Grade
3	Peter		95	75	2900.0
4	Paul		75	95	2313.3
5	Marry		99	98	3035.3
6					
7	Equ in Cell E3: =C3*$C$2+D3*$D$2/SUM($C$2:$D$2)				

Parenthesis, ( ), are missing from around the numerator.

Thus, only D3*$D$2 is divided by the total weight.

Weighted Mean: What is Wrong? #3

	A	B	C	D	E
1	Name		Project 1	Project 2	Class
2		Weight	30	60	Grade
3	Peter		95	75	8167%
4	Paul		75	95	8833%
5	Marry		99	98	9833%
6					
7	Equ in Cell E3: =(C3*$C$2+D3*$D$2)/SUM($C$2:$D$2)				

The equation is golden.

The Class Grades are formatted as percentages and are not percentages.

Fix: Either divide by 100 or

         Change column C and D to percentages.

Weighted Mean: All Golden?

	A	B	C	D	E
1	Name		Project 1	Project 2	Class
2		Weight	30	60	Grade
3	Peter		95	75	81.7%
4	Paul		75	95	88.3%
5	Marry		99	98	98.3%
6					
7	E3: =(C3*$C$2+D3*$D$2)/SUM($C$2:$D$2)/100				

Peter and Paul got the same grades, a 95 and a 75.

How come they do not have the same average?

Quiz: Absolute & Relative References

	A	B	C	D	E	F	G
1		Salary:	$	12.50			Project Total Hours
2	Project	Mon	Tue	Wed	Thu	Fri	
3	CloudSat	2	8	4	8	1	
4	STPSAT	2		4		1	
5	Coriolis	2				1	
6	WindSat	2				1	
7	XS-11	2			1	1	
8	Total Hours						
9	Pay Per Day						

Which formula **entered in B9** can be correctly filled right through F9?

a) =product($B$8,$C$1)   d) =product(B8:$C$1)

b) =product(B8, C$1)   e) = B8*$C$1

c) =product(B8:C$1)

Quiz: Weighted Mean

	A	B	C	D	E
1	Name	Lab 1	Lab 2	Exam	Grade
2	Michael Stipe	90	95	95	
3	Peter Buck	90	97	85	
4	Mike Mills	92	99	75	
5	Bill Berry	95	98	65	
6					
7	Weight	5	10	50	
8	Total Weight			65	

Which equation can be filled down from cell E2, to correctly calculate the weighted mean in cells E2:E5?

a) =(B2*B7   + C2*C7   + D2*D7)/B8

b) =(B2*$B$7   + C2*$C$7   + D2*$D$7)/$B$8

c) =($B$2*$B$7 + $C$2*$C$7 + $D$2*$D$7)/$B$8

d) =($B$2*$B$7 + $C$2*$C$7 + $D$2*$D$7)/B8

Inserting and Renaming Worksheets

12	Dorian	Folie
13	Elias	z
14	Felipe	era
15	Gustav	igu
16	Jeneld	y
17	Jonah	al

Insert...
Delete
Rename
Move or Copy...
Select All Sheets
Tab Color...
View Code

Sheet1 / Sheet2 / Sheet3 /
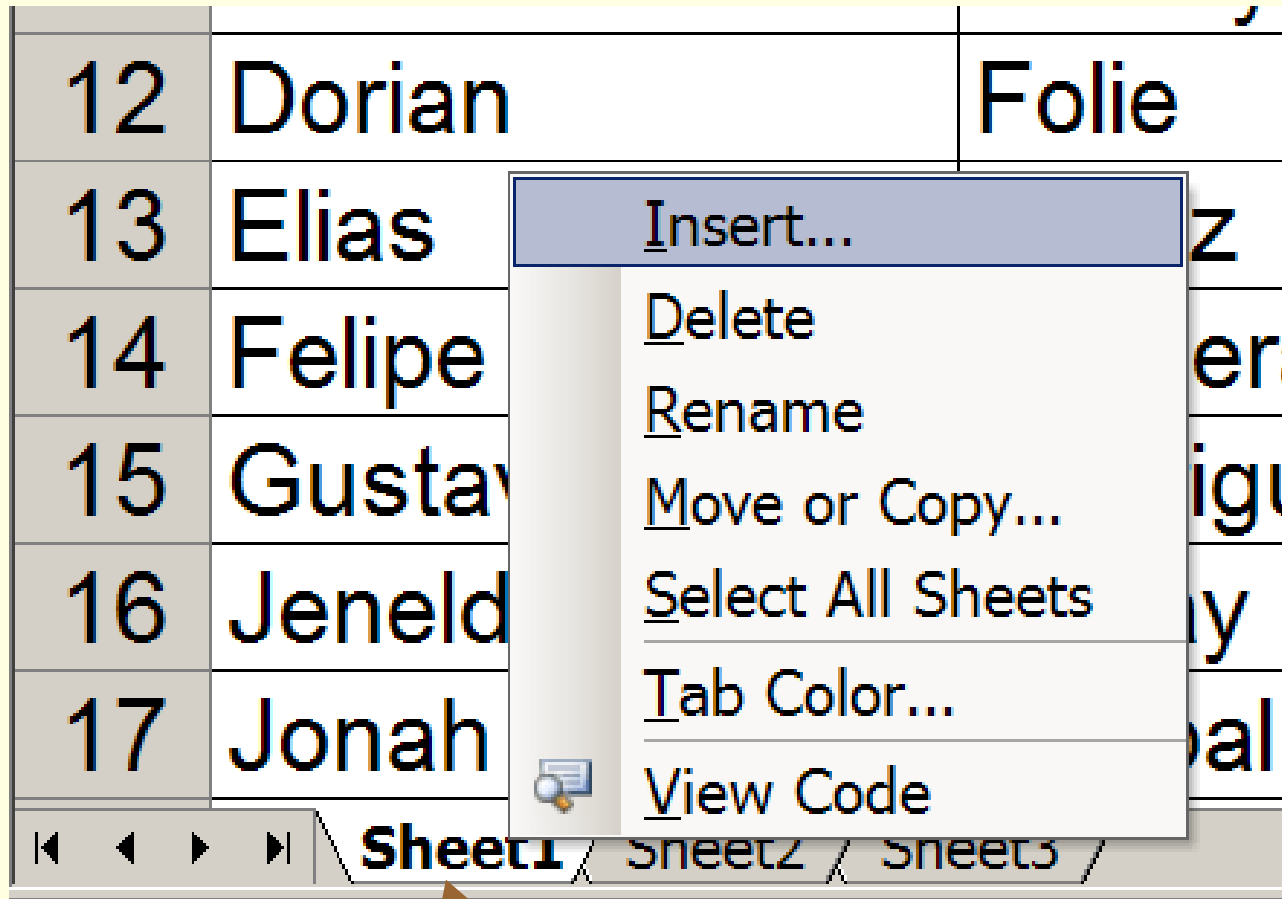
Left click on tab to change worksheets.

Right click on tab to Insert..., Rename, ...

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Data →Sort...

Quiz: Cell Formatting

	A	B	C	D	E	F	G	H	I	J
1	First Name	Last Name	Lab 1	Lab 2	Lab 3	Exam 1	Exam 2	Lab Grade	Exam Grade	Class Grade
2		Points	100	100	100	100	100	300	200	
3							Weights	60%	40%	
4	Joe	Lee	100	98	97	100	98	98.3%	99.0%	99%
5	Paul	Wo	99	0	90	95	92	63%	93.5%	75%

Which Cell is Badly Formatted?
a) H2 b) H5 c) I3 d) J4 e) D4