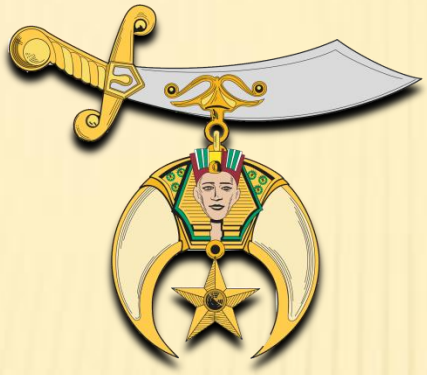


PERSONAL COMPUTERS
SPREADSHEETS

WHAT IS A SPREADSHEET?

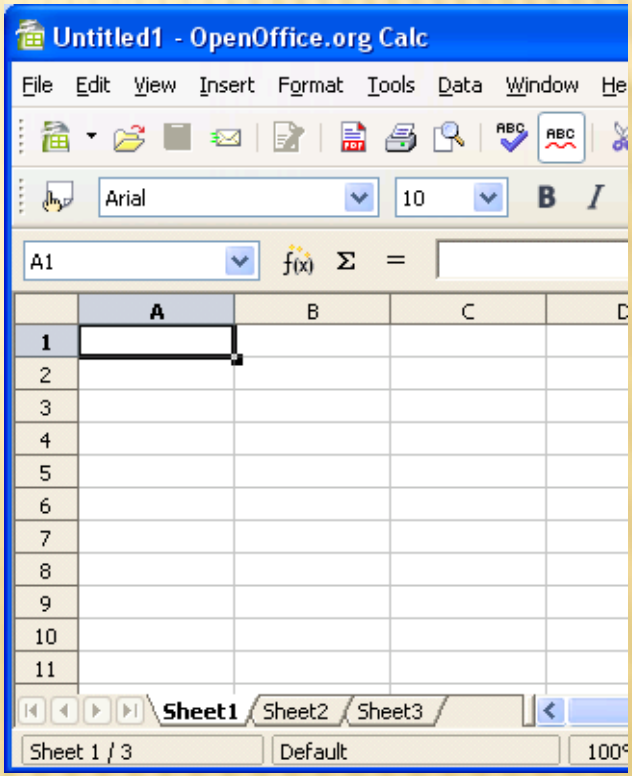
- Anyone Use Spreadsheets?
  - For What?
- What's Your Experience With Spreadsheets?
  - Good, Bad – Explain, Please

TOPICS COVERED IN THIS SESSION

- Create a new workbook
- Enter text and numbers
- Edit text and numbers
- Insert and delete columns and rows

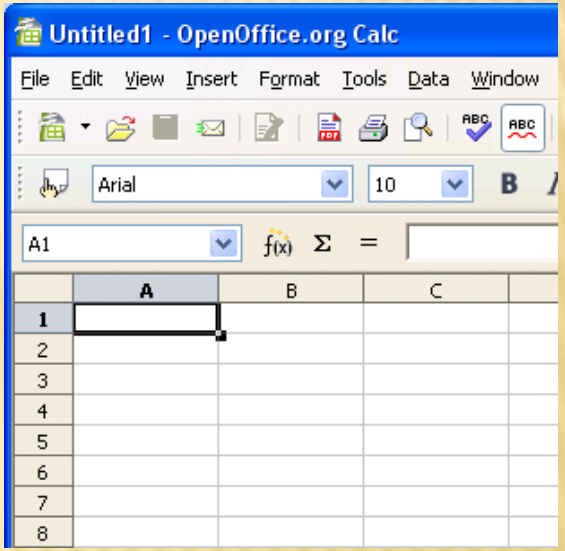
WORKBOOKS AND WORKSHEETS

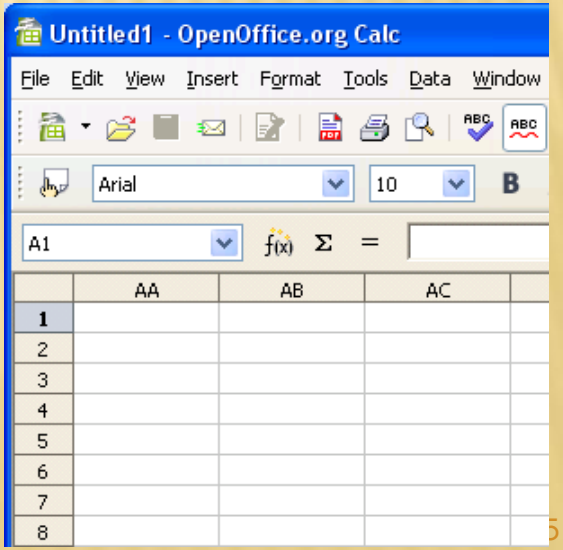
- Start **Excel-OO (Calc)** - When Spreadsheet Starts, A **Workbook** Opens
- Each New Workbook Comes With Three **Worksheets**
- Enter Data Into Worksheets (= Spreadsheets)
- Each Worksheet Name On **Sheet Tab** At Bottom Left Of Workbook Window
  - Sheet1, Sheet2, And Sheet3
- View A Worksheet By Clicking Its Sheet Tab
- Rename Tabs To Make Information Easier To Identify
- Can Add Or Delete Sheets
- To Create A New Workbook – On **File** Menu, Click **New, Spreadsheet**



COLUMNS AND ROWS AND CELLS

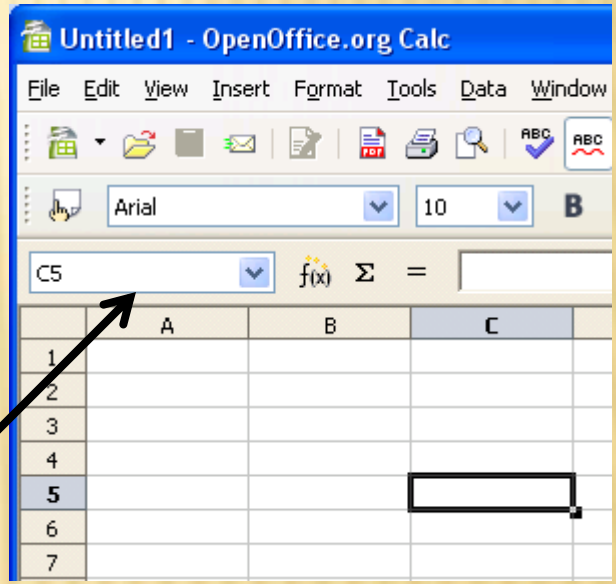
- Worksheets Divided Into Columns, Rows, And Cells
- Columns Go From Top To Bottom On The Worksheet, Vertically
- Rows Go From Left To Right On The Worksheet, Horizontally
- A Cell Is The Space Where One Column And One Row Meet
- Each Column Has An Alphabetical Heading At The Top From A To IV, 256 Columns
- Row Headings Are Numbers, From 1 Through 65,536
- 16,777,216 Cells In Each Worksheet
- Use Cell Reference To Find Cells
  - i.e. B24, AB125, DZ1205





CELLS ARE WHERE THE DATA GOES

- Open A New Workbook, First Cell In Upper-left Corner Of Worksheet Outlined In Black, Indicates Any Data Entered Will Go There
- Click Any Cell In Worksheet To Select Cell
- Select Any Cell, It Becomes The **Active** Cell
- When Cell Is Active, Outlined In Black, Headings For Column And Row Highlighted
- Active Cell Appears In **Name Box**



- Indicators Important When Working Further And Further Down Or Across The Worksheet

EXERCISE 1: RENAME A WORKSHEET TAB

- In A New Workbook, Worksheet Tabs Called Sheet1, Sheet2, And Sheet3
- Right-click ***Sheet1*** Tab (At Bottom Of Window), Then Click ***Rename***
- Type The New Name: ***Practice***, Then Press ***Enter***.
- Tip Can Also Start To Rename Selected Tab By Clicking ***Format*** Menu, Pointing To ***Sheet***, Then Clicking ***Rename***

EXERCISE 2: MOVE FROM ONE WORKSHEET TO ANOTHER

- Click The ***Sheet2*** Tab.
- Now Use A Keyboard Shortcut To Move To The Sheet3 Tab. Press CTRL+PAGE DOWN. Now You're In The Sheet3 Worksheet (It Says "Worksheet 3" At The Top).
- Try The Keyboard Shortcut To Move To The Previous Worksheet. Press CTRL+PAGE UP.

EXERCISE 3: ADD, MOVE, AND DELETE WORKSHEETS

- A Workbook Comes With Three Worksheets, But You Can Add Or Delete Worksheets As You Wish.
- Add A Worksheet - On The ***Insert*** Menu, Click ***Sheet***. Choose ***Before Current Sheet*** Or ***After Current Sheet*** And Press ***OK***.
- A New Worksheet Is Inserted. You See The Practice Tab And Three Other Tabs.

- Move Worksheets - To Change Tab Order, ***Right-click*** A Sheet Tab, And Then Click ***Move*** Or ***Copy***. In The Move Or Copy Dialog Box, Choose Where You Want The Tab To Go, And Then Click ***OK***. You Can Also Drag A Sheet.

- Delete A Worksheet - Click The ***Sheet3*** Tab. On The ***Edit*** Menu, Select ***Sheet***, ***Delete*** Or ***Right-click*** The Sheet3 Tab, And Then Select ***Delete Sheet***.
- You'll See A Message Asking If You're Sure You Want To Delete The Worksheet – Especially If It Contains Data! You're Sure, So Click Delete. The Sheet3 Worksheet Is Deleted.

EXERCISE 4: REVIEW COLUMN HEADINGS AND USE THE NAME BOX

- Click The ***Practice*** Tab.
- Click In The ***Name Box*** In The Upper-left Corner Of The Window Right Above Cell A1.
- Type **AA1** In The ***Name Box***, And Then Press **Enter**.
- Now Cell AA1 Is The Active Cell. It's Outlined In Black, And The Column Heading For Column AA Is Highlighted.
- Column AA Is The 27th Column. After The 26 Letters Of The Alphabet Have Been Used, The Column Headings Start Over Again As Pairs, With AA Followed By AB And So On.
- The Heading For Row 1 Is Highlighted As Well, Since The Active Cell Is In The First Row.
- Now Try Another Way To Activate A Specific Cell. Press ***F5*** To Open The ***Navigator Box***.
- In The Reference Box At The Bottom Of The Dialog Box, Type ***IV*** In The ***Column Box*** And ***65536*** In The ***Row Box***, And Then Press ***Enter***.
- You've Reached The Very Last Cell In The Worksheet, Cell 65,536 In Column IV.
- To Go Back To Cell A1 Anytime, Press ***Ctrl+Home***.

EXERCISE 5: SAVE THE WORKBOOK

- On The ***File*** Menu, Click ***Save*** Or ***Save As***.
- In The ***Save In*** Box, Click The Arrow On The Right To See A List Of Folders To Store The Workbook In.
- ***My Documents*** Folder Is Good Place To Save Files Such As Documents, Worksheets, Or Databases. Select It. Normally, Don't Have To Select This Folder. When You Open The Save As Dialog Box After Starting Most Programs, You'll See My Documents In The Save In Box.
- Notice In The ***Save As Type*** Box Near The Bottom Of The Save As Dialog Box, The File Type Listed. Excel Workbooks Have An ***.xls*** File Extension. Depending On Your Computer Settings, You May Or May Not See The .xls At The End In The Save As Type Box.
- In The ***File Name*** Box, You Can Accept The Name That's Entered For You, Or You Can Enter Another Name.
- Click ***Save***.
- Find And Open The Workbook. On The ***File*** Menu, Click ***Open***.
- In The Look In Box Near The Top Of The Open Dialog Box, My Documents Should Be Listed. If Not, Click The Arrow And Select That Folder.
- Select The Workbook You Just Saved And Click ***Open***.
- Tip - If You Don't See The File, You May Not Have Put It Where You Think You Put It. To See Where You Put It, Open A New File, Click Save As On The File Menu, And See What Folder Is In The Save In Box. This Works Only If You Haven't Saved Anywhere Else In The Meantime.

TEST YOURSELF

- You Need A New Workbook. How Do You Create One?
  - On The ***Insert*** Menu, Click ***Worksheet***.
  - On The ***File*** Menu, Click ***New, Spreadsheet***.
  - On The ***Insert*** Menu, Click ***Workbook***.
- The Name Box Shows You The Contents Of The Active Cell.
  - True.
  - False.
- In A New Worksheet, You Must Start By Typing In Cell A1.
  - True.
  - False.
- There Are Three Worksheets With Every New Workbook. You Can Change That Automatic Number If You Want To.
  - True.
  - False.

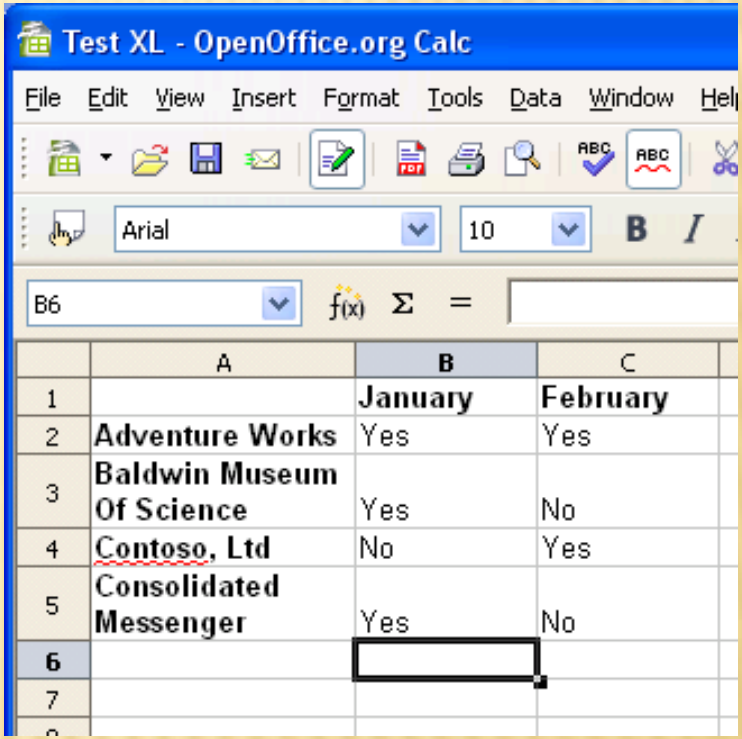
WHAT KIND OF DATA CAN I ENTER?

- You Can Enter Two Basic Kinds Of Data Into Worksheet Cells: Numbers And Text.
- You Can Use To Create Budgets, To Work With Taxes, Or To Record Student Grades.
- You Can Use To List The Products You Sell Or To Record Student Attendance.
- You Can Even Use To Track How Much You Exercise Every Day, And Your Weight Loss, Or How Much Your House Remodel Is Costing You.
- The Possibilities Really Are Endless.

ENTERING DATA

- When You Enter Data, It's A Good Idea To Start By Entering Titles At The Top Of Each Column, So That Anyone Who Shares Your Worksheet Can Understand What The Data Means (And So That You Can Understand It Yourself, Later On).

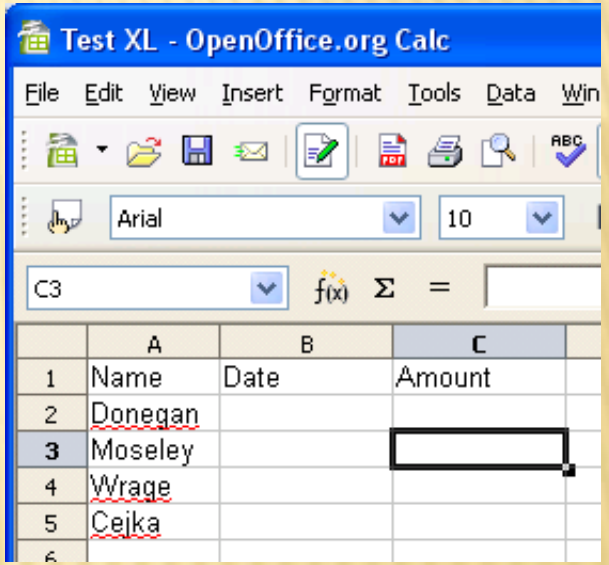
- In The Picture, The Column Titles Are The Months Of The Year, Across The Top Of The Worksheet.



	A	B	C
1		January	February
2	Adventure Works	Yes	Yes
3	Baldwin Museum Of Science	Yes	No
4	Contoso, Ltd	No	Yes
5	Consolidated Messenger	Yes	No
6			
7			

- You'll Often Want To Enter Row Titles Too. In The Picture, The Row Titles Down The Left Side Are The Names Of Companies.
- This Worksheet Shows Whether Or Not A Representative From Each Company Attended A Monthly Business Lunch.

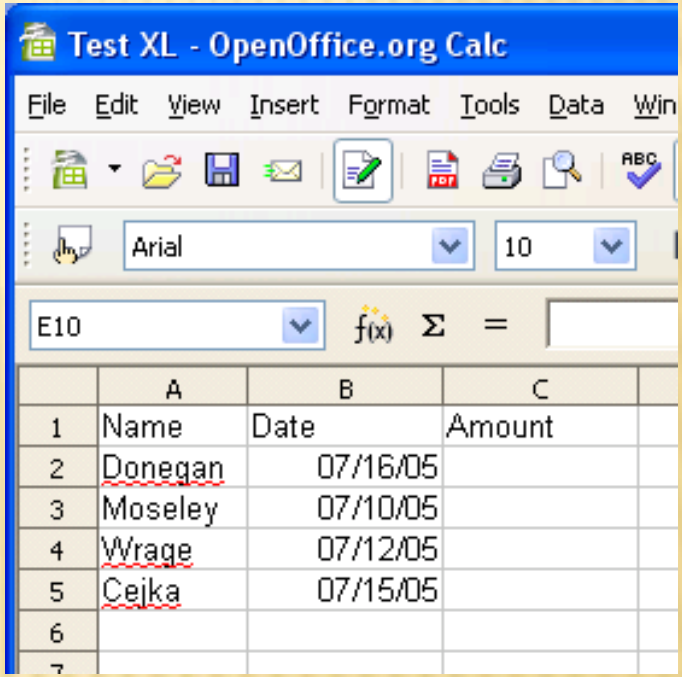
START TYPING



- Create A List Of Salespeople Names. The List Will Also Have The Dates Of Sales, With Their Amounts. So You Will Need These Column Titles: Name, Date, And Amount.
- You Don't Need Row Titles Down The Left Side Of The Worksheet In This Case; The Salespeople Names Will Be In The Leftmost Column.
- Type "Date" In Cell B1 And Press Tab. Then Type "Amount" In Cell C1.
- After You Typed The Column Titles, Click In Cell A2 To Begin Typing The Names Of The Salespeople.
- Type The First Name, And Then Press Enter To Move The Selection *Down* One Cell To Cell A3 (Down The Column), And Then Type The Next Name, And So On.

ENTER DATES AND TIMES

- To Enter A Date In Column B, The Date Column, Use A Slash Or A Hyphen To Separate The Parts: 7/16/2005 Or 16-July-2005.

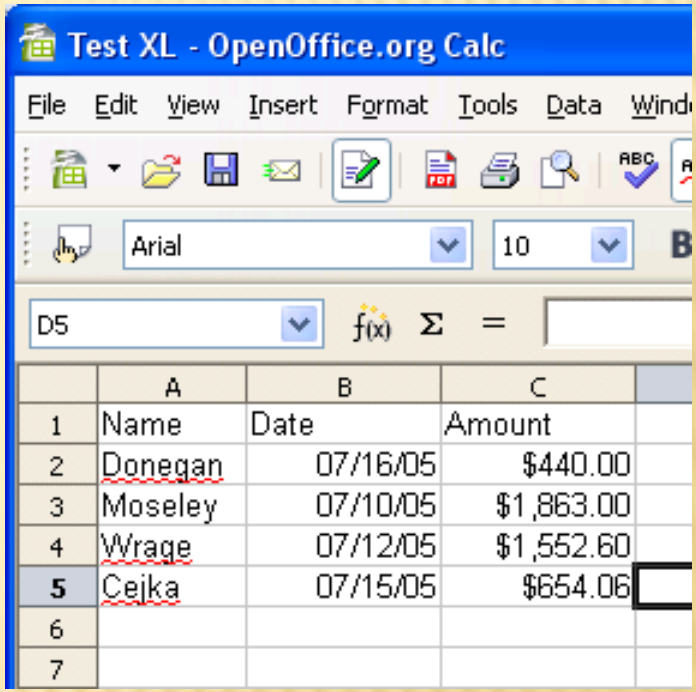


	A	B	C
1	Name	Date	Amount
2	Donegan	07/16/05	
3	Moseley	07/10/05	
4	Wrage	07/12/05	
5	Cejka	07/15/05	
6			

- If You Need To Enter A Time, Type The Numbers, A Space, And Then “AM" Or “PM" — For Example, 9:00 PM.
- If You Put In Just The Time Without AM Or PM, Time Is Recognized As AM.

ENTERING AMOUNTS

- To Enter The Sales Amounts In Column C, The Amount Column, Type The Dollar Sign, Followed By The Amount.



	A	B	C
1	Name	Date	Amount
2	Donegan	07/16/05	$440.00
3	Moseley	07/10/05	$1,863.00
4	Wrage	07/12/05	$1,552.60
5	Cejka	07/15/05	$654.06
6			
7			

- If You Type (100) To Indicate A Negative Number By Parentheses, Excel Will Display The Number As -100.

EXERCISE 1: ENTER DATA USING TAB AND ENTER

- **TAB Goes Right, And ENTER Goes Down.**
  - In Cell A1, Type ***January***. Press ***TAB***. The Selection Moves To The Right, And Cell B1 Is Now The Active Cell.
  - Return To Cell A1 By Clicking In That Cell Or By Pressing The ***Left Arrow*** Key. In Cell A1, Press ***ENTER***. The Selection Moves Down, And Now Cell A2 Is The Active Cell.
  - Return To Cell A1 By Pressing The ***Up Arrow*** Key.
  - You May Prefer To Enter Data By Pressing Tab And Moving Across Rows, Or By Pressing Enter And Moving Down Columns. Use Whichever Method Works Best For You.
- **Sometimes Enter Goes Down And Over**
  - Enter Doesn't Always Move Straight Down The Column. Here's An Example.
  - In Cell E1, Type ***Name***, And Then Press ***Tab***.
  - In Cell F1, Type ***Date***, And Then Press ***Tab***.
  - In Cell G1, Type ***Asset***. Now Press ***ENTER***. Instead Of Going Down The Column To Cell G2, The Selection Went To Cell E2, Which Is Now The Active Cell.
  - What Happened? It Thinks That You're Ready To Start A New Row Of Data Under The One You Just Used. So It Put The Selection In The First Column You Used.

EXERCISE 2: FIX MISTAKES AS YOU TYPE

- In This Exercise You'll Learn About ESC And BACKSPACE.
- These Keys Let You Make Changes Before You Press ENTER Or TAB. They're Useful If You Change Your Mind About What To Enter, Or When You Realize You've Made A Mistake As You Type.
- Click Cell ***B1***. You're Going To Type "February," But You'll Stop Before Completing The Text.
- Type ***Febru*** Press The ***Esc*** Key. The Text Is Deleted.
- Type ***Fev*** In Cell B1. Press The ***Backspace*** Key Once To Delete “v". Type ***bruary*** And Then Press ***TAB*** Or ***ENTER***.

EXERCISE 3: ENTER DATES AND TIMES

- In This Exercise You'll Enter Some Dates And Times And Then Look At How They Are Formatted. You'll Also Take A Look At The Formula Bar.
- Click Cell ***B2***. Enter ***7/16/2009***, And Then Press ***ENTER*** Or ***TAB***.
- Now You'll Type A Time. You Learned In The Lesson That Time Is Interpreted As AM Unless You Type A "PM" After It. To See That, Click Cell ***C2***, Type ***9:00***, And Press ***ENTER***. Now Select Cell ***C2*** Again. Look In The Formula Bar Above Cell C1.
- The Formula Bar Displays The Content Of The Active Cell. In The Formula Bar You Can See How Excel Interprets The Time You Entered: As 09:00:00 AM.
- Select Cell ***D2***, Type ***9:00 PM*** (Be Sure To Leave A Space Between 9:00 And The P), And Press ***Enter***. It Says 09:00:00 PM. Now Select Cell ***D2*** Again. Look In The Formula Bar. The Time Shows There As 09:00:00 PM.

EXERCISE 4: USE AUTOFILL

- Select Cell ***A1***, Where You Previously Typed "January".
- Position The Pointer Over The Lower-Right Corner Of This Cell Until A Black Cross (+) Appears (Not A Thick White Cross). (Be Sure You're At The Lower Corner On The Right, That's Critical.)
- Drag The Fill Handle Down The Column. As You Drag, Screentips Appear To Tell You What Will Be Filled In For Each Row. When The Screentip Says "December" (In Row 12), Release The Mouse Button. Then The List Fills In.
- Try The Same With ***Sunday***.

- Fill In Numbers
- Select Cell ***A15***. Type ***3***, And Then Press ***Enter.***
- In Cell A16, Type ***6***, And Then Press ***Enter***. By Typing Two Numbers, You've Established A Pattern.
- Select ***A15***, Press ***Shift***, Select ***A16***, And Then Release The Shift Button. Both Cell A15 And Cell A16 Are Selected. Position The Pointer Over The Lower-Right Corner Of Cell A16 Until A Black Cross (+) Appears. Drag The Fill Handle Down The Column.
- Release The Mouse Button When The Screentip Says "18" In Cell A20. The Rest Of The Numbers From The Times-Three Table Are Filled In.

- Works For Rows And Columns, Too!

EXERCISE 5: USE AUTOCOMPLETE

- In This Exercise You'll See How The Spreadsheet Will Complete Data Entry For You.
- In Cell ***A23***, Type ***Buchanan***, And Then Press ***Enter***.
- In Cell ***A24***, Type ***B*** As Though You Are About To Enter Buchanan's Name Again.
- The Spreadsheet Will Fill In The Rest For You.
- If You Didn't Actually Want To Type Buchanan's Name Again, You Would Just Keep Typing What You Did Want.
- This Works in Rows Only.

EXERCISE 6: WHEN TEXT IS TOO LONG FOR A CELL

- In Cell ***C6***, Type ***This Is Very Long***, And Press ***Enter***. The Text Overlaps Into The Next Cell.
- Select Cell ***D6***. Type ***ABC*** (Just Ignore The Text That Overlaps From C6) And Press ***Enter***. Now You Can No Longer See All The Text In Cell C6.
- Select Cell ***C6***. Look In The Formula Bar. You Can See All The Text You Originally Typed.
- You Can Make The Column Wider, So That You See All The Text In The Cell.
- Point At The Right Column Boundary Of Column C, Between The Column Headings C And D (Up At The Top, Not In The Worksheet), Until The Pointer Changes To A Dark Cross With Two Arrow Points. ***Double-click*** The Right Column Boundary Of Column C. The Column Will Widen So That All Of The Text In Cell C6 Is Visible.
- Note - When Numbers Or Dates Are Too Wide To Fit Into A Cell, You'll See This: ########. Double-click The Right Column Boundary Next To The Column Heading, And The Column Will Widen.

TEST YOURSELF

- Pressing ENTER Moves The Selection One Cell To The Right.
  - True.
  - False.
- You Learned In The Practice That ###### Means:
  - You've Entered A Number Wrong.
  - You've Misspelled Something.
  - The Cell Is Not Wide Enough.
- To Enter The Months Of The Year Without Typing Each Month Yourself You'd Use:
  - Autocomplete.
  - Autofill.
  - Ctrl+Enter.
- Which Of These Will Be Recognized As A Date?
  - February 6 1947
  - 2,6,47
  - 2-feb-47

EDIT DATA AND REVISE WORKSHEETS

- Edit Data
- Change Data Formatting
  - Number, Text, Color, etc.
- Insert Columns Or Rows

- Open The File, On The CD Provided, Named ***Practice1.xls***

EXERCISE 1: EDIT DATA

- ***Double-Click*** Cell ***A4***. The Insertion Point Appears In The Cell. Where It Appears Depends On Where The Pointer Is When You Double-Click.
- If The Pointer Is At The Left Edge Of The Cell, The Insertion Point Will Appear On The Left. If The Pointer Is At The Right Edge Of The Cell, The Insertion Point Will Appear On The Right. If The Pointer Is In The Middle, Or Thereabout, The Insertion Point Will Appear There.
- You Want The Insertion Point At The End Of Peacock's Name. If It's Not There, Use The ***Right Arrow*** Key To Put It There. Now Press ***BACKSPACE*** Until You've Deleted Peacock's Name.
- Now Undo Your Last Action. Press ***CTRL+Z***. That Will Undo The Deletion And Reinsert Peacock's Name.
- **Tip** - Undo Also Works To Reverse The Last Command Or To Delete The Last Entry You Typed.

EXERCISE 1: EDIT DATA – CON'T

- ***Double-Click*** Cell A4. When The Insertion Point Is Inside The Cell, Double-Clicking Selects All The Data In This Cell. That's Because There Is Only One Word In The Cell.
- If There Is More Than One Word In A Cell, This Method Will Select One Word At A Time If You Double-Click In Each Word.
- Press ***DELETE*** To Get Rid Of The Name In One Keystroke. Press ***CTRL+Z*** To Reinsert The Name Again.
- ***Click*** Cell ***A4***, And Then Click At The End Of Peacock's Name In The ***Formula Bar***.
- Press ***Backspace*** To Delete The Name One Letter At A Time. Notice How The Data Changes In The Cell When You Do This. Then Press ***CRTL+Z*** To Reinsert The Name.
- ***Double-Click*** Cell ***A2***. Buchanan's Name Was Not Completed. If Necessary, Move The Insertion Point To The End. Type ***nan*** At The End Of Her Name And Press ***ENTER***.

EXERCISE 1: EDIT DATA – CON'T

- Now Edit Just One Character.
- ***Double-Click*** Cell ***C3***. The Number Is 1,863.40.
- Use An ***Arrow*** Key To Move The Insertion Point To The 4.
- Delete The 4 And Type ***5***.
- Press ***ENTER***.

EXERCISE 2: DELETE FORMATTING FROM A CELL

- Cell C6 Shows The Number 3,597.90 Formatted Bold And Red. Delete The Number, Using Any Of The Methods You Practiced In The Previous Exercise.
- Type ***1,394.36*** And Press ***ENTER***.
- The New Number Is Also Formatted Bold And Red.
- ***Click*** Cell ***C6***. On The Edit Menu, Point To ***Delete Contents***, Then Check ***Formats*** (Uncheck All Others) And ***Click OK***.
- ***Click*** Cell ***C9***, Which Is Formatted Bold And Green.
- Now You'll Delete Both The Contents And The Formatting At Once.
- On The ***Edit*** Menu, Point To ***Delete Contents***, Then Check ***Delete All*** And ***Click OK***. Both The Data And The Formatting Are Removed In One Step.
- Enter New Data. Type ***$982.43***, And Then Press ***ENTER***.

EXERCISE 4: INSERT AND DELETE COLUMNS AND ROWS

- Insert Columns
  - On The ***Insert*** Menu, Click ***Columns***. An Empty Column Is Inserted To The Left And Becomes Column C. The Former Column C Is Now Column D.
  - Tip You Can Insert Two Or More Columns At Once. Select A Column, Press SHIFT, Select Another Column, And So On, As Many Columns As You Want To Insert. Release SHIFT, And Then On The Insert Menu Click Columns.
- Insert Rows
  - To Insert A New Row, Click Any Cell In The Row Immediately Below Where You Want The New Row. Click A ***Cell*** In ***Row 5*** (You're Going To Insert A New Row Above Row 5).
  - On The ***Insert*** Menu, Click ***Rows***. An Empty Row Is Inserted And Becomes Row 5. The Old Row 5 Is Now Row 6.
  - Tip You Can Insert Two Or More Rows At Once. Select A Row, Press SHIFT, Select Another Row, And So On, As Many Rows As You Want To Insert. Release SHIFT, And Then On The Insert Menu Click Rows.
- Delete Columns
  - ***Click*** On The Column Indicator ***B***.
  - On The ***Edit*** Menu, Click ***Delete Cells***.
  - To Delete More Than One Column, Use Shift To Select Them And Follow The Method Above.
- Delete Rows
  - ***Click*** On The Row Indicator ***6.***
  - On The ***Edit*** Menu, Click ***Delete Cells***.
  - To Delete More Than One Row, Use Shift To Select Them And Follow The Method Above.

TEST YOURSELF

- To delete the formatting from a cell, you would:
  - Delete the cell contents.
  - Click the Format menu.
  - Click the Edit menu.
- You learned in the practice how to undo a deletion. Press:
  - CTRL+Z
  - F4
  - ESC
- To add a column, click a cell in the column to the right of where you want the new column.
  - True.
  - False.
- To add a new row, click a cell in the row immediately above where you want the new row.
  - True.
  - False.

USING FORMULAS & FUNCTIONS

- In This Practice Session, You'll Work A Household Budget. You'll Try Something New By Totaling All The Values In A Row And In A Column.
- Spreadsheets Need Very Precise Instructions, Which Means That Formulas Must Be Typed Exactly As Shown. Missing A Comma Or Parenthesis, Or Misspelling A Function Name, Will Produce Errors.
- From The CD Provided, Open The File Named ***Practice2.xls***

EXERCISE 1: CREATE A FORMULA TO ADD

- Before You Work With The Data That's On The Worksheet, Create A Formula In An Empty Cell In Column A. Select Cell A2, Add 183 To 39, And Press ENTER To Display The Result. Next, Click Cell A2 To See The Formula In The Formula Bar .
- Here's How - Enter An Equal Sign (=), Type ***183*** And The Plus Sign Operator (+), Type ***39***, And Then Press ***ENTER***. The Answer Is 222.
- Note The Formula Bar Contains The Formula You Typed In. The Cell A2 Contains The Answer.

EXERCISE 2: CREATE FORMULAS FOR OTHER ARITHMETIC

- In Column A, Enter Three Separate Formulas In Three Separate Cells.
  - Enter A Formula To Subtract 39 From 183.
  - Enter Another Formula To Multiply 183 By 39.
  - Finally, Enter A Formula To Divide 183 By 39.
- **Here's How**
  - To Subtract, **=183-39** (Answer, 144)
  - To Multiply, **=183*39** (Answer, 7137)
  - To Divide, **=183/39** (Answer, 4.692307692).

EXERCISE 3: ADD UP A COLUMN OF NUMBERS

- Now You'll Work With Functions That Already Exist In The Worksheet.
  - Use Sum To Total The January Values In Column D.
- Here's How
  - First, Display The Function List By Clicking On ***Function List*** In The ***Insert*** Menu. The Function List Appears On The Right Of The Worksheet.
  - ***Click*** In Cell ***D8***, ***Double-Click*** ***Sum*** In The Function List
  - ***Click*** On Cell ***D4*** And Drag Down To Cell ***D7*** (Note That Cells D4 Through D7 Have A Red Box Around Them)
  - Press ***Enter***.
  - The Total Is 95.94.

EXERCISE 4: COPY A FORMULA

- Copy The Formula From Cell D8 To Cell E8.
  - Use The Fill Handle To Copy The Formula In Cell D8 To Cell E8. The February Total Is 126.93.
- Here's How
  - Select Cell D8, And Then Position The Mouse Pointer Over The Lower-right Corner Of Cell D8 Until The Black Cross (+) Appears.
  - Then Drag The Fill Handle Over Cell E8. When You Release The Fill Handle, You Should See The February Total 126.93 In Cell E8.

EXERCISE 5: ADD UP A ROW OF NUMBERS

- Now You'll Try Something New By Totaling The Numbers In A Row Rather Than In A Column.
  - The Procedure Is The Same.
  - You Just Click In A Different Place.
  - Use Sum To Total The Figures In Row 6.
- Here's How
  - ***Click*** In Cell ***F6***
  - ***Double-click*** ***Sum*** In The Function List
  - ***Click*** On Cell ***D6*** And Drag To ***E6***
  - Press ***ENTER***.
  - The Answer Is 48.00.

TEST YOURSELF

- What Do You Type Into An Empty Cell To Start A Formula?
  - *
  - (
  - =
- What Is A Function?
  - A Prewritten Formula.
  - A Math Operator.
- A Formula Result Is In Cell C6. You Wonder How You Got The Result. To See The Formula, You:
  - Select Cell C6, And Then Press CTRL+SHIFT.
  - Select Cell C6, And Then Press F5.
  - Select Cell C6.
- To Divide 853 By 16 In A Formula In Excel, You Would Use What Math Operator?
  - *
  - /
  - -

USING CELL REFERENCES

- In This Practice You'll Revise A Number And See A Column Total Automatically Updated. You'll Also Use An Absolute Reference In A Formula.
- Excel Needs Very Precise Instructions, Which Means That Formulas Must Be Typed Exactly As Shown. Missing A Comma Or Parenthesis, Or Misspelling A Function Name, Will Produce Errors.
- From The CD Provided, Open The File Named ***Practice3.xls***

EXERCISE 1: TYPE CELL REFERENCES IN A FORMULA

- In Cell E9, Type A Formula Using Cell References To Total January Video Rentals And February CD Expenses.
- Here's How
  - In Cell E9, Type =b5+c7
  - Enter The Formula Exactly As Shown, And Then Press ENTER To Display The Formula Result, Which Is 37.96.

EXERCISE 2: SELECT CELL REFERENCES FOR A FORMULA

- In cell E10, try entering the same formula by clicking cell references instead of typing them. Here's the formula: =B5+C7
- Type an equal sign in cell E10.
- Click cell B5, and then type the plus sign (+)
- Click cell C7, then press ENTER to get the result 37.96.

EXERCISE 3: USE AN ABSOLUTE REFERENCE IN A FORMULA

- Figure Out How Much You'd Save With A 7 Percent Discount On February's Video Rentals, Movies, And CDs.
- In Cell ***D11*** Type The Discount Rate, ***0.07***.
- In Cell ***D5*** Type ***=C5*d11***, And Then Press ***Enter***. The Result Is 1.12.
- Next Copy The Formula Down Through Row 7
  - Select Cell ***D5*** And Position The Mouse Pointer Over The Lower-Right Corner Of That Cell Until The Black Cross (+) Appears.
  - Drag The Fill Handle Down The Rows, Releasing It In Cell ***D7***.
  - The Results Are 2.24 In Cell D6 And 2.10 In Cell D7.
- As The Formula Is Copied, The Relative Cell References Change From C5 To C6 To C7, While The Absolute Reference To Cell D11 Does Not Change.
- It Remains As D11 In Each Row It Is Copied To, As You Will See If You Click Cells D6 And D7 And Look At The Result In The Formula Bar Near The Top Of The Worksheet.

EXERCISE 4: ADD UP SEVERAL RESULTS

- Total The Savings From The Previous Exercise By Entering A Formula Into Cell D8.
- Here's How
  - Select Cell ***D8*** By Clicking It
  - ***Double-Click Sum*** On The Function List
  - ***Click*** On Cell ***D5*** And Drag To Cell ***D7***
  - Then Press ***ENTER***.
  - The Result Is 5.46.
  - You Could Also Type =SUM(D5:D7).

EXERCISE 5: CHANGE VALUES AND TOTALS

- See Formula Results Automatically Updated When You Make A Revision.
- In Cell B6 Change "16.00" To "28.00."
- The Total In B8 Will Be Updated, In This Case To 107.94.
- If You Want, Change Any Other Values To See The Total Updated Again.
- Note If Results Are Not Updated, On The Tools Menu, Point To Cell Contents. Make Sure The AutoCalculate Has A Check Mark By It.

TEST YOURSELF

- What Is An Absolute Cell Reference?
  - The Cell Reference Automatically Changes When The Formula Is Copied Down A Column Or Across A Row.
  - The Cell Reference Is Fixed.
  - The Cell Reference Uses The A1 Reference Style.
- Which Cell Reference Refers To A Range Of Cells In Column B, Rows 3 Through 6?
  - (B3:B6)
  - (B3,B6)
- Which Of These Is An Absolute Reference?
  - B4:B12
  - A1
- If You Copy The Formula =C4*d9 From Cell C4 To Cell C5, What Will The Formula Be In Cell C5?
  - =C5*D9
  - =C4*D9
  - =C5*E10