Topics Covered in Video:

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1) **USB Drive to store files from class**
   As is required from our syllabus, you must buy a Jump Drive to store all the Excel and PDF files for our class. Example of USB Jump Drives:

2) **Save As to Download Excel & pdf Files**
   At our class web site, right-click the file, and depending on your browser, point to:
   1) **Chrome:**
      - Open link in new tab
      - Open link in new window
      - Open link in incognito window
      - Save link as...
      - Copy link address
      - Inspect
   2) **Internet Explorer:**
      - Open
      - Open in new tab
      - Open in new window
      - Save target as...
      - Print target
   3) **Mozilla:**
      - Open Link in New Tab
      - Open Link in New Window
      - Open Link in New Private Window
      - Bookmark This Link
      - Save Link As...
      - Save Link to Pocket
      - Copy Link Location
3) **Save Class Files & Create Class Folder**

1. When we download a file, we Navigate to our Jump Drive.
2. In the Save As dialog Box you can create a new folder using the keyboard Ctrl + Shift + N, or use the “New Folder Button”:

   ![Image 1](image1.png)

   **1) Navigate to your Jump Drive**

   **2) Create a new folder using the keyboard Ctrl + Shift + N, or use the “New Folder Button”**

3. Name our class folder “Business Math”:
4. On the Left Side of the Save As dialog box, click (not double-click) on the triangles to open your Jump Drive.
5. Then click (not double-click) on Business Math Folder.
6. Then click Save.

![Image 2](image2.png)

**4) Click (not double-click) on triangle to open Jump Drive**

**5) Click (not double-click) on Business Math**

**6) Click Save**
4) **Windows Explorer to view and open files**
   1. Windows Explorer is a program that allows use to perform File and Folder Management
   2. Windows Explorer allows us to:
      1) Verify files and folders are in correct location
      2) Open Files
      3) Move, Copy Delete files or folders
      4) Backup folders and files
   3. Keyboard to open Windows Explorer = ⌘ + E
   4. Examples of what Window Key Looks Like:

5) **Why we use Excel for Business Math**
   1. Your Job will require it!!!!!
   2. Make many calculations quickly.

   Example for Video of making many “Net Pay” calculations quickly:

   ![Excel Spreadsheet]

   3. Make complicated calculations MUCH easier.

   Example of FV Function (as seen in video):

   ![Excel Spreadsheet]


   Example of changing Year Formula Input and our answer instantly updated (as seen in video):

   ![Excel Spreadsheet]
### 6) Conventions for Class

<table>
<thead>
<tr>
<th>Employee</th>
<th>Gross Pay</th>
<th>Tax Deduction</th>
<th>Net Pay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jesenia Earley</td>
<td>4819.89</td>
<td>578.39</td>
<td>4241.5</td>
</tr>
<tr>
<td>Francene Nobles</td>
<td>5009.01</td>
<td>250.45</td>
<td>4758.56</td>
</tr>
<tr>
<td>Tandra Carbone</td>
<td>5605.10</td>
<td>616.57</td>
<td>4988.61</td>
</tr>
<tr>
<td>Tam Leak</td>
<td>4216.38</td>
<td>252.98</td>
<td>3963.4</td>
</tr>
<tr>
<td>Vince Pitre</td>
<td>4102.42</td>
<td>492.29</td>
<td>3609.94</td>
</tr>
<tr>
<td>Bettie Maes</td>
<td>4388.12</td>
<td>483.81</td>
<td>4354.31</td>
</tr>
<tr>
<td>Edris Cormier</td>
<td>4525.01</td>
<td>497.78</td>
<td>4027.28</td>
</tr>
<tr>
<td>Melda Barrios</td>
<td>5554.84</td>
<td>388.86</td>
<td>5165.98</td>
</tr>
<tr>
<td>Belle Cameron</td>
<td>4046.97</td>
<td>526.11</td>
<td>3520.86</td>
</tr>
<tr>
<td>Doria Kopp</td>
<td>4686.88</td>
<td>328.08</td>
<td>4358.80</td>
</tr>
<tr>
<td>Marita Ricketts</td>
<td>3756.34</td>
<td>413.22</td>
<td>3343.14</td>
</tr>
<tr>
<td>Colleen Leslie</td>
<td>4734.13</td>
<td>520.75</td>
<td>4213.38</td>
</tr>
<tr>
<td>Fae Dunbar</td>
<td>5296.25</td>
<td>317.78</td>
<td>4978.47</td>
</tr>
<tr>
<td>Melissa Rapp</td>
<td>5669.16</td>
<td>566.52</td>
<td>5102.24</td>
</tr>
<tr>
<td>Elhan Harms</td>
<td>5461.85</td>
<td>546.31</td>
<td>4915.66</td>
</tr>
<tr>
<td>Vaynay Mayhew</td>
<td>5209.19</td>
<td>260.49</td>
<td>4949.20</td>
</tr>
<tr>
<td>Orchard Staten</td>
<td>5042.1</td>
<td>302.53</td>
<td>4739.57</td>
</tr>
<tr>
<td>Lou Zook</td>
<td>5119.35</td>
<td>511.92</td>
<td>4607.41</td>
</tr>
</tbody>
</table>

1. **Blue Worksheet Tab** = You work on this sheet. You do things like make calculations / create formulas on these sheets
2. **Red Worksheet Tab** = Shows completed work
3. **Yellow Worksheet Tab** = Sheets with Notes
4. **Black Worksheet Tab** = Homework Problems come after the Black Sheet
5. **Dark Blue Fill with White Font** = Column Headers in Data Set
6. **Dark Blue Fill with White Font** = Variable (Formula Inputs) Names
7. **Cells with no Fill Color** = Item typed in cell
8. **Cells with Light Green Fill Color** = Calculation = Formula
9. **Cells with Light Yellow Fill Color** = Instructions, like for practice homework or tests.
7) What does Excel do?

1. Store Raw Data.
   Excel can store raw data, like names and numbers, but it is not as effective in storing Raw Data as a Database is at storing Raw Data.

2. Makes Calculations (Formulas)
   Like calculating a Net Pay amount

3. Perform Data Analysis (Convert Raw Data into Useful Information).
8) Excel Workbook Layout

2. Cells = Intersection of Column & Row, like cell D14
   This is important because we can store raw data in cells and refer to raw data in cells in formulas by using Cell References.

3. Worksheets = “Spreadsheet” = Sheet = All The Cells
4. Sheet Tab Names Worksheet Tab Names = Name of Sheet
5. All Sheets = Workbook = The Whole Excel File = Workbook

The Formula is in Cell D2. The Formula uses Cell References that refer to the numbers in cells B2 and C2.
6. Move Between Sheets: Right-Click Sheet Navigation Arrow

AFTER you Right-Click Sheet Navigation Arrow, the “Activate” dialog box pops-up that allows to select and then jump to any sheet in the Excel Workbook.

7. Ribbon Tabs = Tabs at Top of Excel Window that contain the commands that we can use.

Home Ribbon Tab with command buttons is showing

Formula Ribbon Tab with command buttons is NOT showing

Home Ribbon Tab contains “groups” of command buttons like the Number group or the Font group

8. Quick Access Toolbar = QAT
   1) We will not use it in this class.
   2) We will use these keyboards for Save, Undo and Redo:
   3) Ctrl + S = Save Changes in File
   4) Ctrl + Z = Undo
   5) Ctrl + Y = Re-do = Undo the Undo

9. Zoom in and out = Ctrl + Roll Wheel on Mouse
   1) You can zoom the view of the Excel Worksheet by
9) First Excel Formula: Total Sales = Price * Number Units Sold

1. Formulas always start with an Equal Sign as first character in cell. When you type an Equal Sign as first character in cell you are telling Excel that you want to create a formula.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boomerang</td>
<td>Sold</td>
<td>Price</td>
<td>Number</td>
<td>Total Sales</td>
</tr>
<tr>
<td>1</td>
<td>Product</td>
<td>21.95</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Sunset</td>
<td>21.95</td>
<td>5</td>
<td>109.75</td>
</tr>
<tr>
<td>3</td>
<td>Flattop</td>
<td>29.95</td>
<td>2</td>
<td>59.90</td>
</tr>
</tbody>
</table>

   1) Equal Sign Starts All Formulas

2. We use cell references to refer to cells that have numbers that we need in our formula. You can use the Arrow Keys on the Navigation Pad on a Standard Keyboard (or Arrow Keys on Laptop) to put Cell References into a Formula.

3. Type a multiplication Symbol (asterisk key on Number Pad or Shift + 8)

   Note: Use asterisk key on Number Pad or Shift + 8 as seen in this picture:
4. Enter Cell Reference for Number of Units.

5. Use Ctrl + Enter to put the formula in the cell and keep the cell selected. We can see the answer from the formula in the Cell D2 and we can see the formula in the Formula Bar.

6. To Copy the formula down the column, you can Double-Click the “Fill Handle” with your Cross Hair or "Angry Rabbit" Cursor:
7. After you Double-Click the Fill Handle with your Cross Hair or "Angry Rabbit" Cursor the formula will copy down the column and stop at the last row because there are no more rows of data:

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BoomerangSold Product</td>
<td>Price</td>
<td>Number Units Sold</td>
<td>Total Sales</td>
</tr>
<tr>
<td>2</td>
<td>Sunset</td>
<td>21.95</td>
<td>5</td>
<td>109.75</td>
</tr>
<tr>
<td>3</td>
<td>Flattop</td>
<td>29.95</td>
<td>2</td>
<td>59.9</td>
</tr>
<tr>
<td>4</td>
<td>Flying Eagle</td>
<td>32.95</td>
<td>5</td>
<td>164.75</td>
</tr>
<tr>
<td>5</td>
<td>Sunset</td>
<td>21.95</td>
<td>12</td>
<td>263.4</td>
</tr>
<tr>
<td>6</td>
<td>Flying Eagle</td>
<td>32.95</td>
<td>5</td>
<td>164.75</td>
</tr>
<tr>
<td>7</td>
<td>Flying Eagle</td>
<td>32.95</td>
<td>15</td>
<td>494.25</td>
</tr>
<tr>
<td>8</td>
<td>Flattop</td>
<td>29.95</td>
<td>2</td>
<td>59.9</td>
</tr>
<tr>
<td>9</td>
<td>Aspen</td>
<td>22.95</td>
<td>3</td>
<td>68.85</td>
</tr>
<tr>
<td>10</td>
<td>Yanaki</td>
<td>25.95</td>
<td>12</td>
<td>311.4</td>
</tr>
<tr>
<td>11</td>
<td>Yanaki</td>
<td>25.95</td>
<td>2</td>
<td>51.9</td>
</tr>
<tr>
<td>12</td>
<td>Sunset</td>
<td>21.95</td>
<td>12</td>
<td>263.4</td>
</tr>
<tr>
<td>13</td>
<td>Flying Eagle</td>
<td>32.95</td>
<td>23</td>
<td>757.85</td>
</tr>
<tr>
<td>14</td>
<td>Flattop</td>
<td>29.95</td>
<td>19</td>
<td>560.05</td>
</tr>
<tr>
<td>15</td>
<td>Aspen</td>
<td>22.95</td>
<td>13</td>
<td>298.35</td>
</tr>
<tr>
<td>16</td>
<td>Yanaki</td>
<td>25.95</td>
<td>24</td>
<td>622.8</td>
</tr>
<tr>
<td>17</td>
<td>Sunset</td>
<td>21.95</td>
<td>18</td>
<td>395.1</td>
</tr>
<tr>
<td>18</td>
<td>Flattop</td>
<td>29.95</td>
<td>7</td>
<td>209.65</td>
</tr>
<tr>
<td>19</td>
<td>Flying Eagle</td>
<td>32.95</td>
<td>19</td>
<td>626.05</td>
</tr>
</tbody>
</table>

7) The formula “Total Sales = Price * Number Units Sold” was copied through the Range of Cells D2:D19.
8. After you copy a formula through a range of cells, ALWAYS select the last cell in the range and hit the F2 Key to verify that the formula is correct. F2 puts the cell in Edit Mode so we can visually see if Cell References are pointing to the correct Formula Inputs.

NOTE: On a Laptop Computer you may have to use the Fn key to get the F2 key to work. See picture at end of this pdf file.

8) ALWAYS check last cell using the keyboard F2 to see if Cell References are pointing to the correct Formula Inputs

Notice that the formula always has Cell References that are looking two-cells-to-the-left (Price) times one-cell-to-the-left (Units). These types of Cell References are called “Relative Cell References”

10) Selecting a Range of Cells with the Selection Cursor

1. Goal: Select all cells on range B31:I33.

2. With Selection Cursor in middle of Cell B31, click and drag to the side.

3. Drag the Selection Cursor until cell I33.

4. **DO NOT** USE THE MOVE CURSOR TO SELECT CELLS:

5. **DO NOT** USE THE “ANGRY RABBIT” CROSS HAIR CURSOR TO SELECT CELLS:
11) Number Formatting

1. Number Formatting = A façade that sits on top of Number.
2. Number Formatting can be applied in the Number group in the Home Ribbon Tab.

3. The number under the Number Formatting can be different than what you "see" on the surface of the cell.

4. Number Formatting can save us a lot of type because we don’t have to type as many characters into the cell.

5. Be Careful!!!!!!
   1) Number Formatting is only a façade.
   2) Number Formatting only changes what we “see”.
   3) Number Formatting does not Change the underlying Number.
   4) If you decrease the decimals using the Decrease Decimal Button in the Number group in the Home Ribbon Tab, the decimals are not removed, they are just “displayed” with fewer decimals:

   With Range B31:I33 selected, Choose Currency Number Formatting in the Number group in the Home Ribbon Tab.

   With Cell B31 selected, we see “$110,404.00”, 11 characters. This is the façade, this is what you “see” on the surface of Cell B31.

   With Cell B31 selected, the Formula Bar shows what is actually in Cell B31, underneath the Number Formatting. There are only 6 Characters.

   Fewer Decimals are “Displayed” in Cell B32.

   $76,179 is NOT the actual number in the cell. $76,179 is only what you “see”.

   Decrease Decimal Button

   Formula Bar shows that 76178.5 is the ACTUAL number in Cell B32
12) Second Excel Formula for Net Income & How To Copying Formula to the Side

1. With Cell B33 selected, create the formula =B31-B32. The displayed answer of $34,226 is what we “see” in cell B33. The Formula Bar shows us the formula.

![Formula Bar shows us Formula.](image)

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Jan</td>
<td>Feb</td>
</tr>
<tr>
<td>31</td>
<td>Revenue</td>
<td>$110,404</td>
</tr>
<tr>
<td>32</td>
<td>Expenses</td>
<td>$76,179</td>
</tr>
<tr>
<td>33</td>
<td>Net Income</td>
<td>$34,226</td>
</tr>
</tbody>
</table>

Displayed answer of $34,226 in Cell B33

2. To copy the formula to the side, hover your cursor over Fill Handle and when you see the “Angry Rabbit” Cursor, click and drag to the side until your cursor is over cell I33:

![Use the F2 Key to put the cell in Edit Mode and verify that the Relative Cell References are pointing to the correct Formula Inputs](image)

3. Selecting Cell I33, use the F2 Key to put the cell in Edit Mode and verify that the Relative Cell References are pointing to the correct Formula Inputs.
13) Verify that Number Formatting is NOT displaying a misleading Number

1. Notice that: 110404 - 76179 = 34225     NOT: 34226
2. Number Formatting is "displaying" a misleading answer

3. To fix this, selecting the Range of Cells B31:I33 with the Selection Cursor and use the Increase Decimal Button in the Number group in the Home Ribbon Tab.

14) PDF Notes

1. Be sure to read them because there are a written and pictorial description of what is shown in the Video.

15) Practice Homework & Answers to Homework

1. Practice Homework & Answers to Homework are always located on the Worksheets at the end of the Excel Workbook.
New Keyboard Shortcut & Mouse Tricks:

Save As Dialog Box or Windows Explorer:
1) Ctrl + Shift + N = Create a new folder
2) Ctrl + E = Keyboard to open Windows Explorer

Excel:
3) Move Between Sheets = Right-Click Sheet Navigation Arrow
4) Ctrl + S = Save Changes in File
5) Ctrl + Z = Undo
6) Ctrl + Y = Re-do = Undo the Undo
7) Ctrl + Roll Wheel on Mouse = Zoom screen size in and out (Not Print Size)
8) Arrow Keys = Put Cell References into Formulas after you type an equal sign as first character in cell.
9) Shift + 8 = Multiplication symbol in Math
10) * on Number Pad = Multiplication symbol in Math
11) Ctrl + Enter = When you have a single Cell in Edit Mode and
12) F2 = Puts a cell in Edit Mode so we can visually see if Cell References are pointing to the correct Formula Inputs
   i. Note: On a Laptop Computer you may have to use the Fn key to get the F2 key to work.
   ii. As seen here from page 2 in syllabus:

3. Laptop computers have many different configurations. But if you have a laptop, you may have to access the F Keys using the Fn button (Function key). Here is a picture of a Surface Laptop Keyboard:

   ![F Key must be used to access F Keys](image)

4.