

ACTIVITY EXAMPLE



KEY WORDS

Spreadsheets | excel | page setup | excel formula | keyboard shortcuts | digital literacy | financial literacy | productivity

ALSO USEFUL FOR

Maths | Business studies | Economics | Accounting | Finance | Human Resources

PROGRAMME OUTLINE

2 POINTS OF CONTACT

- Business representatives come into classroom during three-week spreadsheets unit (x1)
- Workplace visit (x1)

EXAMPLE

1. Business representatives come into classroom, introduce themselves to the students, background to accounting, their careers and how IT and spreadsheets are used in the industry. **Student activity:** Interactive spreadsheets presentation using excel shortcuts and Copycat Limited exercise.
2. **Workplace visit:** Includes overview of the wider company, its employees, offices around the world etc. Student tour of bank branch, meeting staff and hearing about different careers. Seeing accounting 'behind the scenes'. **Student activity:** Exercise showing students what a typical accounting job looks like and a few Xero tips and tricks.



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CONTENT WE WILL COVER

- Useful keyboard shortcuts
- Page Setup
- Paste Special – Values / Formula / Transpose
- Copy / Paste Visible Cells
- Filters
- Text to Columns
- Conditional Formatting
- Lists
- Pivot Tables
- Formula – SUM / SUMIF / VLOOKUP / IF / IFERROR / LEFT / RIGHT / SUBTOTAL
- Useful keyboard shortcuts

USEFUL QUICK KEYS

- Select Row = Shift + Spacebar
- Select Column = Ctrl + Spacebar
- Highlight multiple cells = Shift + Arrow keys
- Step into a cell = F2
- Absolute and Relative References = F4
 - Note, there are several iterations when copying formula
 - \$C\$4 = maintains cell as point of reference
 - C\$4 = maintains row as a point of reference
 - \$C4 = maintains column as a point of reference
- Go to the bottom / top / left / right of a data set = END + Arrow keys

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PAGE SETUP

The screenshot shows the Page Setup dialog box in Microsoft Excel. The 'Gridlines' checkbox is checked and highlighted with a red box. The 'Print area' is set to A1:J602. The 'Page' tab is selected, showing margins: Top: 0.8, Header: 1, Left: 1, Right: 0.6, Bottom: 0.9, Footer: 0.4. The 'Center on page' section has 'Vertically' checked and highlighted with a red box.

PASTE SPECIAL – VALUES / FORMULA / TRANSPOSE ETC

- Short key = ALT + E then S

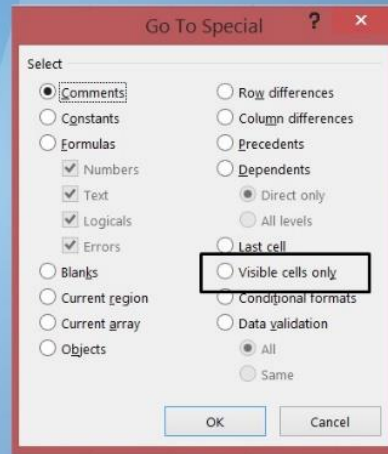
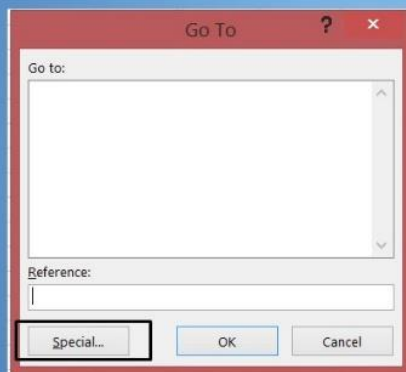
The screenshot shows the Paste Special dialog box. The 'Values' option is selected and highlighted with a red box. The 'Formulas and number formats' option is also selected and highlighted with a red box. The 'None' operation is selected and highlighted with a red box. The 'Transpose' checkbox is checked and highlighted with a red box.

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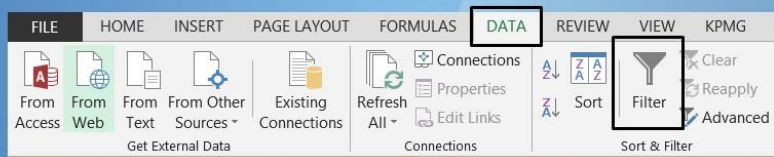
COPY / PASTE VISIBLE CELLS

- Select data
- Short key = CTRL + G or F5



FILTERS

- Ensure you have selected the cell or row you want to filter
- Short key = CTRL + SHIFT + L
- Data -> Filter

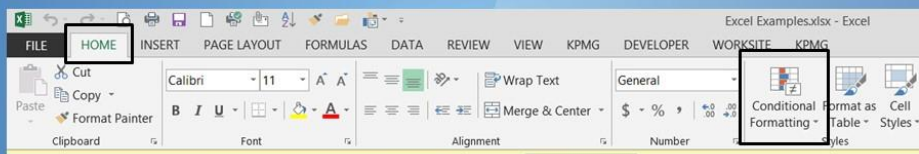


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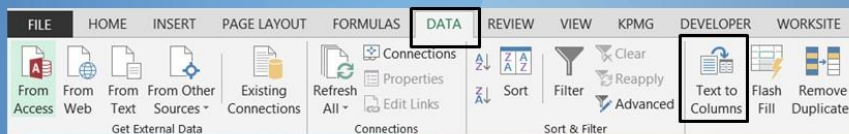
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CONDITIONAL FORMATTING

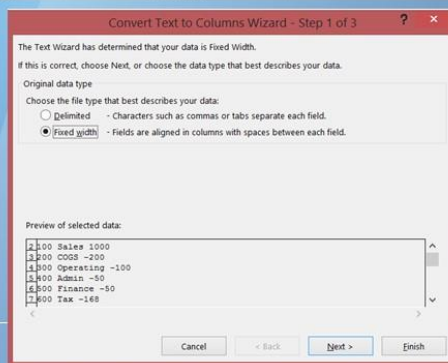
- Home -> Conditional Formatting -> New Rule -> Format cells that contain.



- Data -> Text to Columns
- Ensure that data is selected that you want to split



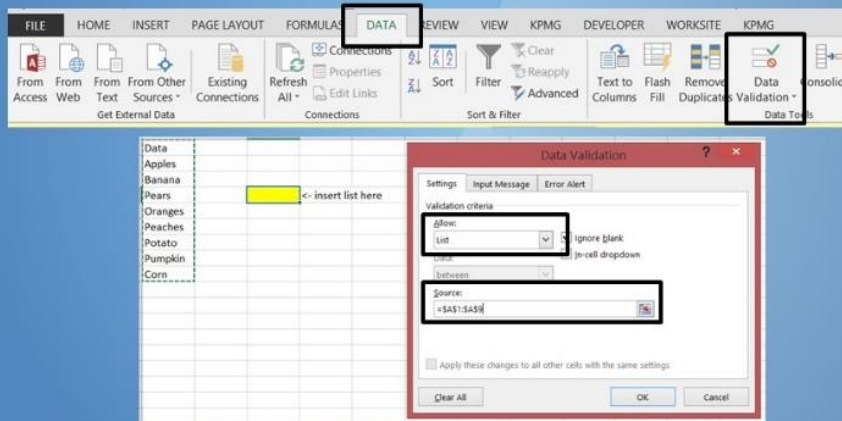
- Delimited – common
- Fixed width – on occasion



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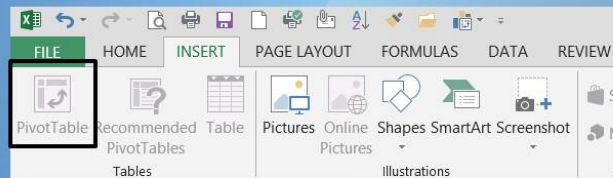
LISTS

- Data -> Data Validation
- Allow = List
- Source = Select data set



PIVOT TABLE

- Ensure your data set has headers
- Select the data set
- Insert -> Pivot Table
- You now have the option to put the fields in your pivot. You can drag or click



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FORMULA

- VLOOKUP allows you to lookup a value in a data set
 - Formula -> =vlookup(Array, Data set, Column to look up, 0)
 - 0 = false (exact)
 - Similar to a sumif but only takes first value in lookup
- IF is a logic formula. Basically you are validating information e.g. if cell X = Apple, then I want YES to show, if it isn't, then I want NO to show
 - Formula -> =IF(CellX="Apple","YES","NO")
 - You can look for an exact match or range using =,<,>,<=,>, or both
 - Whenever using text in a formula it needs to be within " ".
- IFERROR is similar to an IF formula, however this formula applies a logic where there is an error in the formula e.g. IFERROR in cell X then 0.
 - Formula -> =IFERROR(CellX,"YES")
 - Yes can be replaced with a formula, text or value.
 - Usually applied to a vlookup formula

FORMULA

- Use SUM to sum a set of data. Note, a sum will also include hidden cells.
 - Shortcut -> ALT =
 - Formula -> =SUM(Range)
- LEFT / RIGHT allows you to select certain values/text in a cell from the left or the right.
 - Formula -> =LEFT(cell, num chars)
 - Formula -> =RIGHT(cell, num chars)
- SUMIF sums a set of data based on a criteria. Effectively, the range is the data set, the criteria is what you want to sum and the sum range is the values that you want to sum.
 - Formula -> =SUMIF(Range, Criteria, Sum of Range)

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Excel Shortcuts by Operation

| Key | Function | Key | Function |
|---|---|-----------------------|--|
| Formatting | | Editing | |
| Ctrl + 1 | Opens Cell Formats dialog box* | F2 | Go into edit mode |
| *In Cell Formats dialog, press Ctrl+Tab and Ctrl+Shift+Tab to navigate between tabs | | Shift + F2 | Go into edit comments |
| Date format | | F4 | Repeat the last action OR anchor the cell reference (in edit mode) |
| Ctrl + Shift + * | General format | F7 | Spell check |
| Ctrl + Shift + 1 | Number format | F9 | Show the numeric output of highlighted formula (in edit mode) |
| Ctrl + Shift + 2 | Time format | Ctrl + Z | Undo the last action |
| Ctrl + Shift + 3 | Date format | Ctrl + Y | Redo the last action |
| Ctrl + Shift + 4 | Currency format | Ctrl + F | Opens Find dialog box |
| Ctrl + Shift + 5 | Percent format | Ctrl + H | Opens Replace dialog box |
| Ctrl + Shift + 6 | Exponent format | Shift + F4 | Find again |
| Fonts | | Ctrl + Enter | Apply the current edits in formula bar to every cell currently selected |
| Ctrl + Shift + F | Cell Formats dialog box - Font | Alt + Enter | Move to a new line (in edit mode) |
| Ctrl + B | Bold font | Ctrl + Del | Delete to end of line (in edit mode) |
| Ctrl + I | Italic font | Structure | |
| Ctrl + U | Underline font | Ctrl + + | Insert cell, row, or column |
| Ctrl + 2 | Toggle bold | Ctrl + - | Delete cell, row, or column |
| Ctrl + 3 | Toggle italic | Ctrl + 0 | Hide rows |
| Ctrl + 4 | Toggle underline | Ctrl + 9 | Hide columns |
| Ctrl + 5 | Toggle strikethrough | Ctrl + Shift + 9 | Unhide rows |
| Borders | | Ctrl + Shift + 0 | Unhide columns |
| Ctrl + Shift + 7 | Outline border | Shift + Space | Select row |
| Ctrl + Shift + - | Remove borders | Copy and Paste | |
| Navigation | | Ctrl + D | Copy the top most cell in a selection of cells to every highlighted cell below |
| F5 | Opens GoTo dialog box | Ctrl + R | Copy the left most cell in a selection of cells to every highlighted cell to the right |
| Home | Go to the first cell in the row | Ctrl + * | Copy the formula from the cell above the active cell into the formula bar |
| End | Go to end mode | Ctrl + Shift + * | Copy the value from the cell above the active cell into the formula bar |
| Ctrl + Home | Go to the first cell (A1) | Ctrl + C | Copy selection |
| Ctrl + End | Go to the last active cell in the sheet | Ctrl + X | Cut selection |
| Ctrl + PgUp | Go to previous sheet | Ctrl + V | Paste |
| Ctrl + PgDn | Go to next sheet | Ctrl + Alt + V | Opens Paste Special dialog box |
| Alt + PgUp | Left one screen | Calculation | |
| Alt + PgDn | Right one screen | Shift + F9 | Recalculate open workbooks |
| Ctrl + Tab | Go to next workbook | Shift + F9 | Recalculate worksheet |
| Ctrl + Shift + Tab | Go to previous workbook | Names | |
| Ctrl + Arrow | Move to the edge of region | Ctrl + F3 | Opens Name Manager dialog box |
| Reviewing | | Ctrl + Shift + F3 | Create names from selection |
| F5 | Opens GoTo dialog box | Macros | |
| Ctrl + \ | Show inconsistent cells in selected rows | Alt + F8 | Opens Macro dialog box |
| Ctrl + Shift + \ | Show inconsistent cells in selected columns | Alt + F11 | Opens VBA Editor |
| Ctrl + * | Toggle formula view | Help | |
| Ctrl + [| Trace precedent on the same sheet | F1 | Help index |
| Ctrl +] | Trace dependent on the same sheet | General | |
| Ctrl + Shift + [| Trace all precedents on the same sheet | Ctrl + O | Open workbook |
| Ctrl + Shift +] | Trace all dependents on the same sheet | Ctrl + S | Save workbook |
| General | | Ctrl + P | Opens Print dialog box |
| Ctrl + O | Open workbook | Ctrl + W | Close workbook |
| Ctrl + S | Save workbook | Alt + F4 | Close Excel |
| Ctrl + P | Opens Print dialog box | F12 | Save as |
| Ctrl + W | Close workbook | F10 | Activate menu |
| Ctrl + F4 | Close Excel | | |
| Alt + F4 | Close Excel | | |
| F12 | Save as | | |
| F10 | Activate menu | | |

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| Employee | Department | Hours Week 1 | Hours Week 2 | Hours Week 3 | Hours Week 4 | Total Hours This Month | Department | Total Hours This Month |
|------------------|-------------|--------------|--------------|--------------|--------------|------------------------|------------------------|------------------------|
| Gaylene Johnston | Admin | 12.7 | 39.3 | 6.8 | 27.6 | | Insert list here | SumIF |
| Janice Watson | Admin | 12.9 | 23.5 | 44.4 | 47.7 | | | |
| Bob Dylan | Sales | 8.6 | 25.5 | 44.1 | 39.4 | | | |
| Sanjay Patel | Sales | 30.7 | 24.4 | 33.0 | 43.2 | | Enter departments here | |
| Ellen Chan | Printing | 48.1 | 30.3 | 2.9 | 24.3 | | | |
| Tamati Tangaroa | Printing | 43.5 | 13.9 | 35.1 | 20.0 | | | |
| Jake Patu | Maintenance | 33.3 | 42.2 | 45.6 | 11.0 | | | |
| James Burns | IT | 11.8 | 22.8 | 20.1 | 29.8 | | | |
| Lee Swagger | Printing | 16.2 | 36.9 | 24.6 | 25.1 | | | |
| Allen Burns | Admin | 15.1 | 0.3 | 44.1 | 26.2 | | | |
| John Jones | Printing | 27.9 | 14.2 | 22.6 | 34.9 | | | |
| Hank Thomas | Printing | 20.6 | 29.5 | 45.8 | 30.4 | | | |
| Ryco Cena | Maintenance | 34.9 | 27.4 | 20.9 | 2.8 | | | |
| James Reynolds | IT | 34.0 | 23.9 | 27.3 | 21.9 | | | |
| Guy Reynolds | Printing | 48.7 | 26.1 | 21.5 | 0.4 | | | |
| Naomi Jones | Printing | 16.8 | 16.0 | 17.0 | 33.7 | | | |

- Step 1:** Separate first and last names using text to columns. Note: make sure to add new column first.
- Step 2:** Copy and paste special values over formulas generating random numbers.
- Step 3:** Sum total hours worked for the month. Alt + equals.
- Step 4:** Apply filters to data set.
- Step 5:** Extract data for Admin department only using copy visible values. New Sheet.
- Step 6:** Create a list of the different departments (manual input needed).
- Step 7:** Use sumIF function to calculate number of hours worked in a month for different departments.
- Step 8:** Apply conditional formatting to show employees who has worked less than 7.5 hours showing up as red.
- Step 9:** Create a pivot table of the data. Filter by department, names in the rows and hours worked as values. New Sheet.

Teacher note: This material goes beyond what is ordinarily taught at Year 10 level and was designed for more advanced students. The material would need to be pared back and/or co-delivered with the teacher for most students at this level.