## ICT IGCSE Practical - Revision Presentation

## Spreadsheets

- 20.1 Create a Data Model
- 20.2 Test the Data Model
- 20.3 Manipulate Data
- 20.4 Present Data


## ICT IGCSE Practical - Revision Presentation

## Spreadsheets

Cell References


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Named cells >> Right Click on the Cell >> Select Define Name >> Enter New Name for Cell




Named ranges >> Right Click on the Cell >> Select Define Name >> Enter New Name for Range

| $\pm \mathrm{M}$ | N | 0 |
| :---: | :---: | :---: |
| 1 |  |  |
| 2 | Mobile Phone | Price |
| 3 | Samsung s3 | £ 250.00 |
| 4 | Iphone 4 | £ 300.00 |
| 5 | Samsung s4 | £ 275.00 |
| 6 | I phone 5 | £ 250.00 |
| 7 | Galaxy Fame | £ 160.00 |
| 8 | 1 Phone 5s | £ 360.00 |
| 9 | SamsungNote 3 | £ 250.00 |
| 10 | T-2-1 |  |



Define Nagme...


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## Spreadsheets

## Formatting

## Chapter 20: Data Analysis



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## Spreadsheets

## Number Formatting




More Accounting Formats...
€ 65.65
€ 75.75
€ 87.00
$€$

## Format Cells



## Tip: Currency

Sometimes a 0 will be displayed as a dash when the numbers have been formatted as a Currency using the method shown on the left.

You need to ensure the formatting of the cell is set to Currency and not Accounting.

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Hide and Show Columns/Rows:


To hide/show Rows or Columns to you need to right click on either the column letter or row number. You then need to select hide/show.

If you have hidden the C Column then you would have to select the $B$ \& D columns to unhide the $C$ column.

## Insert and Delete Columns/Rows:



1) First select either the column letter or row
2) Right click your mouse >> select insert
3) This will insert a row before the selected column or row.
4) If you would like to delete a row or column you simply highlight the row number or column letter >> right click >> Select Delete.

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Merging Cells:


## Tip: Merging Cells

1. Highlight the cells you want to merge
2. Click on the Merge \& Center Icon

## Shading and Patterns:



## Tip: Shading Cells

You may be asked to put a specific pattern into a cell. You can do this by right clicking your mouse and selecting the Fill Option. You can then select the pattern and colour

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## Headers \& Footers



## Back to Normal View

You can ge hack to tho normal view if you select any cell and then click on Normal.



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## Creating Graphs

| 4 | A | B | C | D | E | F | G |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Task 1: Mobile Phone Sales |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |
| 4 | Sales |  |  |  |  |  |  |  |
| 5 |  | January | Febuary | March | April | May | June | T |
| 6 | Iphone 6 | 15 | 15 | 15 | 40 | 15 | 15 |  |
| 7 | Samsung s5 | 18 | 18 | 18 | 18 | 18 | 18 |  |
| 8 | Sonv Xneria | 5 | 5 | 5 | 5 | 5 | 5 |  |

- Highlight the cells that will be required to create the chart.
- Select the correct chart (Bar, Pie, line etc.)
- You add labels to your axis by using the select data option.



## A graph is used to visual display data which is easy to read and interpret.



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## Spreadsheets

## Formulas


s！sスןеu＊еұед ：0乙 дәұдечว
$=\mathrm{D} 3^{*} \mathrm{E} 3$
＝D3－J10
＝D3／」10
－Formulas can be typed into the formula to bar to work out simple calculations．
－A formula will begin with a＝（equal sign）．
－Refer to the cell reference（A4）before you write your formula ．
－You can either type the cell reference or click on the cell．
－You can create simple formulas to：
－ADD（＋）
－Multiply（＊）
－Subtract（－）
－Divide（／）
－Even if you update the numbers in the cell the formula will automatically work out the new value．

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## Simple Functions



Functions are predefined formulas and are already available in Excel.

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Absolute Reference \& Relative Reference


When you use AutoFill to duplicate a formula into the cells below then you must use absolute cell referencing if you want the cells to be referencing to one particular cell.

Absolute cell referencing will lock in a particular cell. To absolute cell reference you must insert a dollar sign before Letter and number of the cell.

All the prices will be multiplied by the \% in E3.

The Price is relative referencing. When the formula is dragged down the formula references to the next price.


In the example to the left if you do not use absolute cell referencing on the $25 \%$ then the Price will be multiplied against the content in E4.

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=Count and CountA

=Count(Range)
This function will count the cells within the range that contain only numbers.


| Mobile Brands |  |
| :---: | :---: |
| $\frac{-1}{\top}$ | Apple |
|  | Apple |
|  | Samsung |
|  | Sony |
|  | Apple |
| $\begin{aligned} & 0 \\ & \underset{\sim}{0} \\ & 00 \\ & \text { D } \end{aligned}$ | Blackberry |
|  | Sony |
|  | Apple |
|  | Apple |
|  | Samsung |
|  | HTC |
|  | Sony |



## =CountA(Range)

This function will count all the cells within the range that are not empty.

## The count function will only Count the cells. Do not get confused with Sum.

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## Count IF

## =Countif(Range,Criteria)

This function will count the cells which contains a specific criteria from the range

Example: We need to count the Prada bags from the range.

| Prada | COUNTIF |
| :--- | :---: |
| Marc Jacobs | $\sqrt{\text { COUNTIF(range, criteria) }}$ |


| HandBags |  |
| :---: | :---: |
|  | MARC JACOBS |
|  | LOUIS VUITTON |
|  | MARC JACOBS |
|  | PRADA |
|  | MARC JACOBS |
|  | MARC JACOBS |
|  | HERMES |
|  | MARC JACOBS |
|  | FENDI |
|  | LOUIS VUITTON |
|  | MARC JACOBS |
|  | PRADA |



Some times you may have to count all cells apart from a certain criteria.

In this example you we want to count all the brands apart from Marc Jacobs
=countif(Range,
"<>Marc Jacobs")
=Countif(Range,"Prada") or =Countif(Range,"I19") Not: =Countif(Range," ">>criteria")

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## Count Functions with Criteria's

| Cars Brands |  |  |  |
| :---: | :---: | :---: | :---: |
| $\frac{-1}{\vec{D}}$ | Nissan | PathFinder | 2014 |
|  | Toyota | land cruiser | 2008 |
|  | GMC | Yukon | 2007 |
|  | Mercedes | clclass | 2014 |
|  | Nissan | PathFinder | 2009 |
| $\begin{aligned} & \text { D } \\ & 0 \\ & \sim \\ & 0 \text { D } \\ & 0 \end{aligned}$ | Toyota | land cruiser | 2008 |
|  | GMC | Yukon | 2013 |
|  | Mercedes | clclass | 2007 |
|  | Toyota | land cruiser | 2014 |
|  | chevrolet | Captiva | 2009 |
|  | Nissan | PathFinder | 2012 |
|  | chevrolet | trailblazer | 2013 |

Some times you may have to use the following to find a specific criteria:
$<$ - less than
$>$ - more than
= - equal to
=countif(range,">=2012")

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## Count Functions

$=$ Count(Range) - This will count a range of cells which only includes numbers.
$=$ CountA(Range,Criteria) - This will count all the cells which are not empty.
=Countif(Range,Criteria) - This will count a range of cells which includes a specific criteria.

Not =Countif(Range,">>Criteria") - This will count everything apart from the specific criteria.

=CountIF(Range,Criteria)
When you reference to a criteria you can either write the criteria in speech marks or reference to a cell that contains the criteria.

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## Count Function Exam Examples

Use a COUNTIF function in cell C7 to count the number of products made by the Supplier with a Ccode that matches the contents of cell B7. This function must include both absolute and relative referencing and must not use a named range. Do not count any entries in rows 1 to 23.

Replicate this function into cells C8 to C21 to count the number of products in stock made by each Supplier.

In cell C2 use a function to count the number of trips to the destination where the value in the Dcode column matches the contents of cell B2. This function must use the correct named range.

Replicate this function into cells C 3 to C 8 to calculate the number of trips booked to each of the other destinations.

In cell B11 use a function to count the number of item codes in this invoice.

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```
Sum IF
```



## =SUMIF(B4:B10,"virgin",F4:F10)

Range
Sum_Range

Range: The criteria is "virgin". Look at the table and highlight the range of cells which includes "Virgin".

Criteria: You can either reference to a cell or write the criteria in quotation marks.

SumRange: This will sum up only the criteria values from the sum range.

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## Sum IF with Absolute and Relative Cell Referencing

## Chapter 20: Data Analysis



## The Range and the Sum Range have absolute cell referencing.

When the formula is replicated the absolute cell referenced cells will stay the same and will not move position.

H5 is relative cell referencing. It will move down when the formula is replicated.

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## Average IF



AVERAGEIF(range, criteria, [average_range])

## A averageif will work out the average from a specific criteria (condition) from the average_range.

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## SumIF Function Exam Examples

In cell C2 use a function that includes both absolute and relative referencing to calculate the sum of the Minutes column if the SCode column contains GBA. Do not include rows 1 to 10.

Replicate this function into cells C3 to C8 to sum the total Minutes for each SCode.

In cell D2 use a function to add the total number of days (using the Duration column) booked for this destination. This function must use the correct named ranges.

Replicate this function into cells D3 to D8 to calculate the total number of days booked for the other destinations.

In cell C11 use a function to add the total number of days (using the Duration column) for holidays starting in the month of January. This function must include both absolute and relative referencing and must not use a named range.

Replicate this function into cells C12 to C22 to calculate the total number of days booked for the other months in 2010.

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## IF Statement

If the units sold is more than or equal to the targets sales than the target has been met.


1. Logical Test

Is units sold more than or equal to the target sales.
2. If the statement is true then the "true statement" will be printed in the cell.
3. If the statement is false then the "false statement" will be printed in the cell.

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## IF Statement with a Calculation

If student discount has been given ("Yes") then for the true statement you have to calculate $10 \%$ of Price. This will be the value for the student discount. If the student discount does not contain "Yes" than the false value (0) will be shown.

=IF(D4="Yes",C4*10\%,0)


## 1. Logical Test

Does the Cell in D4 equal "Yes"
2. If the Logical Test is true then the calculation ( $10 \%$ of the price) will be shown.
3. If the statement is false then the false value ( 0 ) will be shown.

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## Nested IF

A nested if will contain more than one true statement. In this example the delivery type will be either A, B or Free.

The Nested if will check the first logical Test. If the first test is false then it will check the next logical test. If both tests are false then the false value will be shown.

=IF(C4="a" ,3.50,IF( C4="b" ,4.50,0))


## 1. Logical Test 1

Does the Cell in C4 equal " A "
2. If the Logical Test 1 is true then 3.50 will be printed.

## 3. Logical Test 2

Does the Cell in C4 equal " $B$ "
2. If the Logical Test 2 is true then 4.50 will be printed.

If both logical tests are false the false value (0) will be printed.

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## Exam Question Example: Nested IF

In cell F27 use a formula to calculate the discount using the Sub total, Number of units and the three discount rates A, B and C.

## Multiply the Sub total by:

- Discount $A$ if less than 5 units are sold

True

- Discount B if between 5 and 19 (inclusive) units are sold


## True

False
Step 1: Identify the cells which cells will be used for the formula. Cells are shaded in Yellow for now. (B12, B15, B16, B17 \& F26)

Step 2: Identify the cell which will be used for the logical Test (B12).

Step 3: Identify the Logical Tests and True Conditions.

Step 4: Identify the False Condition.

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Exam Question Example: Nested IF (Working out the True and False Conditions)
In cell F27 use a formula to calculate the discount using the Sub total Number of units and the three discount rates A, B and C.
Multiply the Sub total by:

- Discount A if less thar 5 units are sold True
- Discount B if between 5 and 19 (inclusive) units are sold
- Discount C if 20 or more units are sold. False

|  | A |
| :--- | :--- |
| 8 | Invoice created by: |
| 9 | Yasar Ahmad 12345678 |
| 10 |  |
| 11 | Number of items |
| 12 | Number of units |
| 13 |  |
| 14 | Discount percentage rat |
| 15 | Discount A |
| 16 | Discount B |
| 17 | Discount C |
| 18 |  |
| 19 | Item |
| 20 | Trail Special |
| 21 | Roadster 3 |
| 22 | Diamond Mountain |
| 23 | Trekkerz |
| 24 | Trekkerz Topper |
| 25 |  |
| 26 | Sub total |
| 27 | Discount amount |
| 28 | Invoice total |
|  |  |




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## If Statement Exam Example

In cell D11 use a formula to return $\mathbf{N}$ if the value in the Minutes late column is less than or equal to zero or to return $Y$ if the value in the Minutes late column is greater than zero.

Nested IF Exam Examples
In cell H4 enter a formula to display the word Yes if the hours worked are greater than the contract hours, display the word No ff the hours worked are the same as the contract hours or display the word Incomplete if the hours worked are less than the contract hours.
=if(Hours Worked > Contract Hours, "Yes",
If(Hours Worked = Contract Hours, "No", "Incomplete"))
In cell E3 enter a formula to display the viewing cost if a local taxi is used. If the distance to the property is:

- less than 5 kilometres, the cost will be 2 dollars
- 5 kilometres or more and less than 15 kilometres, the cost will be 5 dollars
- 15 kilometres or more, the cost will be 10 dollars.


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## Nested IF Exam Examples

```
In the Unit Retail column (Cell F24) use an IF function to calculate the retail price of
each unit.
If the Code is \(D\) then multiply the named cell Discount by the Unit Purchase price. If the Code is \(N\) then multiply the named cell Normal by the Unit Purchase price.
If the Code is \(P\) then multiply the named cell Premium by the Unit Purchase price. If the Code is not \(D, N\) or \(P\) then return the Unit Purchase price.
Replicate this function so that the Unit Retail price for each item is shown.
```

In cell J2 use a formula to calculate the sales commission on this property. The sales commission is $\$ 10,000$ plus:

- If the property has an Area (sq ft) of less than or equal to 500 square feet ( sq ft ), $5 \%$ of the Price
- If the property has an Area (sq ft) greater than 500 square feet ( sq ft ) and less than 4000 square feet (sq ft), 7.5\% of the Price
- If the property has an Area (sq ft) greater than or equal to 4000 square feet ( sq ft ), 10\% of the Price


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## Vlookup

Using VLOOKUP is similar to looking up a person's name in a telephone book to get a telephone number. VLOOKUP looks at a value in one column, and finds its corresponding value on the same row in another column.


Table_Array or lookup table

We need to use a lookup function to find the corresponding data from the lookup table for each book title .

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## Vlookup

1. Lookup_Value

| BOOK NAME (Lookup Value) | Auther (LOOKUP) | Shop (LOOKUP) | Stock Level (Lookup) |
| :---: | :---: | :---: | :---: |
| Divergent | =VLOOKLP(A4 |  |  |
| The Fall of Arthur | VLOOKUP(Ioohwin value, table_array, col_index_I |  |  |

2. Table_Array

1) Select the lookup value. The lookup value will appear also in the lookup table (table_array).
2) Select the lookup table (table_array). This may be in the same sheet, next tab or another excel file. Select the lookup value and then the output value.

Make sure you absolute cell reference the table_arrray.

Tip: If the table array is on an external sheet then it will automatically Absolute Cell Reference the table.

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## Vlookup

3. col_Index_num

4. Range_Lookup

3) Select the column in the table for the output value.

In this example the shop is in the third column of the selected table so therefore you would write 3.
4) You need to select false which is an exact match. This means the Vlookup will only find an exact match for the output value.

Remember to close the brackets.

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Look up a Output Value from a Table Arrray

Tip: When you are looking at the table array you must start from the cell you are looking up. In this Example:

Lookup Value - Player Name (C5)
Lookup Output - Goals Scored (E5)

The output value will always be right of the lookup value.

| Player Name | Club | Goals Scored |
| :--- | :---: | :--- |
| David de Gea | Man Utd |  |
| Sergio Busquets | Barcelona |  |
| Manuel Neuer | Bayern Munich |  |
| David Silva | Man City |  |
| Zlatan Ibrahimovic | PSG |  |
| Xabi Alonso | Real Madrid |  |
| Yaya Toure | Man City |  |
| Mesut Ozil | Arsenal |  |
| Gerard Pique | Barcelona |  |
| Radamel Falcao | Monaco |  |
| Franck Ribery | Bayern Munich |  |
| Sergio Ramos | Real Madrid |  |



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## Approximate Lookup

 grades example if the percentage (\%) is 90 or more than the grade will be A*.

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## HLOOKUP works horizontally. You will

 be required to select the row rather than a column for a VLOOKUP.| Ma | AD | DS | SA | Cl |
| :---: | :---: | :---: | :---: | :---: |
| Manager | Admin | Deputy | Sales | Cleaner |





WWW.YAHMAD.CO.UK
2) Select the Table Array and absolute cell reference if required.
3) Select the Row to find the output data. In this case the data is in Row 2.
4) You need to select Approximate or exact match.

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## LOOKUP

| SUM | $\checkmark\left(x \checkmark f_{x}\right.$ - LOOKUP(E6,\$C\$6:\$C\$15,\$B\$6:\$B\$15) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | B | C | D | E | F | G | H |
| Lookup |  |  |  |  |  |  |  |
| Task1: Using the Lookup Function find the Sales Person Name and Branch for each Order ID. |  |  |  |  |  |  |  |
| Branch | Sales Person Name | Order ID |  | Order ID | Sales Person Name | Branch |  |
| Leeds | Lionel Messi | 4541 |  | 4541 | -LOOKUP(E6,\$C\$6:\$ | C\$15,\$B\$6:\$B\$15) |  |
| Manchester | Cristiano Ronaldo | 4542 |  | 4544 | z LOOKUP(lookup_val | ue, lookup_vector, [r | _vector]) |
| Leeds | Andres Iniesta | 4543 |  | 4549 | ELLOOKUP(lookup_val | ue, array) |  |
| London | Zlatan Ibrahimovic | 4544 |  | 4542 | Cristiano Ronaldo | Manchester |  |
| Leeds | Radamel Falcao | 4545 |  |  |  |  |  |
| Manchester | Robin van Persie | 4546 |  | 1. Lookup Value |  |  |  |
| Liverpool | Andrea Pirlo | 4547 |  |  |  |  |  |
| Liverpool | Yaya Toure | 1)4548 |  |  |  |  |  |
| Manchester | Edinson Cavani | 4549 |  |  |  |  |  |
| Liverpool | Sergio Aguero | 4550 |  |  |  |  |  |

3. [Result_Vector] 2. Lookup_Vector

Looks up a value either from a one-row or one-column range or from an array.

Provided for backward Compatibility

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## LOOKUP



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Using Extract with LOOKUP Functions

| Lookup <br> Value |  |
| :--- | :--- | :--- |
|  | Barcode Brand <br> AB00123  <br> EF00123  <br> EF00769  <br> AB00183  <br> EF00724  <br> AB00226  <br> DE00127  <br> AB00153  <br> CD00123  <br> EF00130  |



| A | Samsung |
| :--- | :--- |
| B | Nokia |
| C | Apple |
| D | LG |
| E | Sony |

In this example the first character of the Barcode needs to be used a single lookup value in the Table array shown below the table. The match will be an exact Match.


Cell Reference for lookup ${ }^{\text {Number of Characters looking up from left }}$
4 AB00123)=VLOOKUP(LEFT(A4,1),\$A\$17:\$B\$21,2,FALSE)
5 BC00765 VLOOKUP(lookup_value, table_array, col_index_num, [range_lookup]) hi

## Extract Functions:

Left: Returns the specified number of characters from the start of a text string.
Right: Returns the specified number of characters from the end of a text string.
Mid: Returns the character from the middle of a text string, given a starting position and length.

In cell C20 use a formula to look up the type of cycle. Use the first character of the Item Code as the single lookup value and the named range Type for the array.

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## Lookup Exam Examples

In cell D22 use a lookup function to show the Job Description. Use the Code column for the lookup value and the Job codes table for the array. This function must include both absolute and relative referencing and must not use a named range.

Replicate this function so that the job description is shown for each of the other employees.

In cell G22 use a formula to calculate the pay for this employee. This will look up the rate of pay from the named range RATE and multiply it by the number of hours worked. Choose an appropriate format for this cell. This function must not include absolute cell referencing.

Replicate this formula so that the amount of pay is shown for each of the other employees.

In cell D22 use a lookup function to show the job description. Use the Job code column for the lookup value and the range code for the array.

Replicate this function for each employee.

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Lookup Exam Examples

In the Destination column use a lookup function to show the destination name. Use the Code column for the lookup value and the file JXDEST.CSV for the array. This function must include both absolute and relative referencing and must not use a named range.

Replicate this function so that the destination name is shown for each of the codes.

In the Name column use a lookup function to show the staff name. Use the SCode column for the lookup value and the external file N8CODE.CSV for the array. Make sure that you use both absolute and relative referencing within your function.

Replicate this function so that the names for each of the 7 members of staff are shown.

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## Spreadsheets

## Test the Data Model (Test Table)

## Chapter 20: Data Analysis

| 4 | A | B | C | D |
| :---: | :---: | :---: | :---: | :---: |
| 1 | Task 3: (Tr |  |  |  |
| 2 |  |  |  |  |
| 3 | Bonus Type | Bonus per Goal |  |  |
| 4 | Bonus A | £ 1,000.00 |  |  |
| 5 | Bonus B | £ 1,500.00 |  |  |
| 6 | Bonus C | £ 5,000.00 |  |  |
| 7 |  |  |  |  |
| 8 | Basic Bonus: | f 15,000.00 |  |  |
| 9 |  |  |  |  |
| 10 | Name | Goals | Bonus Type $(A, B, C)$ | Final Bonus |
| 11 | Ronaldo | 35 | Bonus C | £190,000.00 |
| 12 | Messi | 17 | Bonus B | £ 40,500.00 |
| 13 | Rooney | 29 | Bonus B | £ 58,500.00 |
| 14 | Silva | 5 | Bonus A | £ 20,000.00 |
| 15 | Xavi | 12 | Bonus A | £ 27,000.00 |

Use a nested if statement to work out the Bonus Type $(A, B, C) \&$ Final Bonus

Add Basic Bonus to (Goals* Bonus Type):

- If goals scored is less than is less than 16 than goal bonus is type A.
- More than or equal to 16 and less than $\mathbf{3 0}$ than goal bonus is type B.
- More than or equal to 30 than goal bonus is type C .


## Input

| Cell <br> reference | Data chosen | Test Data Type | Cell reference | Expected | Actual |
| :---: | :---: | :---: | :---: | :---: | :---: |
| B11 | $\mathbf{1}$ | Extreme | C11 | Bonus A | Bonus A |
| B12 | 25 | Normal | C12 | Bonus B | Bonus B |

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## Spreadsheets

## Test the Data Model (2015 Nov Example)

11 In cell G4 enter a formula to calculate the pay for this employee using their pay rate and hours worked.
Select appropriate data that you can enter into cell F4 to test this formula. Enter this data in the Data chosen column of the test table in your Evidence Document.
Record in the Expected column of your test table the value you expect to see in cell G4.
Enter your test data into cell F4 and record the result in the Actual column of your test table.

| - | A | B | C | D | E | F | G | H |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | TWCT - Week 14 Payroll |  |  |  |  |  |  |  |
| 2 | Employees |  |  |  |  |  |  |  |
| 3 | Payroll Number | Employee | Pay code | Pay rate | Contract hours | Hours worked | Pay | Overtime? |
| 4 | T0042 | Hernandez | B2 | 9 | 35 | 25 | 225 |  |
| 5 | T0046 | Castro | F1 | 7.5 | 35 |  | 0 |  |


| Input |  | Output |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Cell reference | Data chosen | Cell reference | Expected | Actual |
| F4 | 25 | G4 | 225 | 225 |

Tip: You should always expect to see the actual

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## Spreadsheets

## Test the Data Model

12 In cell H4 enter a formula to display the word Yes if the hours worked are greater than the contract hours, display the word No if the hours worked are the same as the contract hours or display the word Incomplete if the hours worked are less than the contract hours.


Select three items of appropriate data that you can enter into cell F4 to test this formula. Enter this data in the Data chosen column of the test table in your Evidence Document.

Record in the Expected column of your test table the output you expect to see in cell H 4 .
Enter each item of test data into cell F4 and record each result in the Actual column of your test table for each item of test data.


| Contract hours | Hours worked |  | Pay |
| ---: | ---: | :---: | :---: |
| Overtime? |  |  |  |
| 35 | 34 | 306 Incomplete |  |

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## Spreadsheets

## Conditional Formatting

Highlights (Colour scales) cells based on criteria.

1) Highlight the cell range in which you wish to apply Conditional Formatting.
2) Click On Home >> Conditional Formatting.
3) Click on Highlight Cell Rules
4) Select the Criteria type (Less Than, Between, Equal To, Contains etc)
5) Enter the criteria.




A*C-Green
D - Amber
Less than D - Red

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## Spreadsheets

## Validation

- Data Validation prevents invalid data from being entered into a cell.
- For example, you could reject invalid dates or numbers greater than a given value.
- You can also force input to be chosen from a dropdown list of values you specify.


This example we have to refer to a list to lookup specific values which can be entered into the cell (/,L or A)

3. You may enter an error message.


## 2: Select the list and then the source

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## Spreadsheets

## Validation

## Chapter 20: Data Analysis



3. You may enter an error message.


2: Select the Whole Number and then enter the Min and Max numbers in the range.

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## Spreadsheets

## Rounding

|  | Round to 1DP | Round Up | Round Down | INT |
| :---: | :---: | :---: | :---: | :---: |
| 65.69 | =ROUND(C3,1) | =ROUNDUP(C3,0) | =ROUNDDOWN(C3,0) | $=1 \mathrm{NT}(\mathrm{C} 3)$ |
| 75.75 | =ROUND(C4,1) | =ROUNDUP(C4,0) | =ROUNDDOWN( 44,0 ) | =INT(C4) |
| 64.23 | =ROUND(C5,1) | =ROUNDUP(C5,0) | =ROUNDDOWN(C5,0) | =INT(C5) |
| 87.87 | =ROUND(C6,1) | =ROUNDUP(C6,0) | =ROUNDDOWN( 66,0$)$ | =INT(C6) |
| 34.23 | =ROUND(C7,1) | =ROUNDUP(C7,0) | =ROUNDDOWN(C7,0) | =INT(C7) |
| Total | =ROUND(SUM(D3:D7),0) | =ROUNDUP(SUM(E3:E7),0) | =ROUNDDOWN(SUM(F3:F7),0) | =INT(SUM(G3:G7)) |


|  | Round to 1DP | Round Up | Round Down | INT |
| ---: | :---: | :---: | :---: | :---: |
| $£ 65.69$ | $£ 65.70$ | $£ 66.00$ | $£ 65.00$ | $£ 65.00$ |
| $£ 75.75$ | $£ 75.80$ | $£ 76.00$ | $£ 75.00$ | $£ 75.00$ |
| $£ 64.23$ | $£ 64.20$ | $£ 65.00$ | $£ 64.00$ | $£ 64.00$ |
| $£ 87.87$ | $£ 87.90$ | $£ 88.00$ | $£ 87.00$ | $£ 87.00$ |
| $£ 34.23$ | $£ 34.20$ | $£ 35.00$ | $£ 34.00$ | $£ 34.00$ |
| Total | $£ 328.00$ | $£ 330.00$ | $£ 325.00$ | $£ 325.00$ |


| =ROUND | Rounds a number to a specified number of digits. |
| :--- | :--- |
| =ROUNDDOWN | Rounds a number down, towards zero |
| =ROUNDUP | Rounds a number up, away from zero |
| =INT | Rounds the number down to the nearest integer |

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## Spreadsheets

Filtering
Tip: Filtering is used to interrogate the data very similar to how a query works in Access.
Highlight the cells you want to filter and then select the filter icon from the tool bar.


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## Spreadsheets

## Filtering

Interrogate the data to find all the calls where the Length is Long and where the SCode is VCR or RSP

Print this data.
Make sure that your name, Centre number and candidate number are printed in the header of the page.

Interrogate the data to find all the calls where the Length is Long
Print this data.
Make sure that your name, Centre number and candidate number are printed in the header of the page.

Interrogate the data, to find all the Red items with a Unit Purchase price between 0.51 and 0.58 Euros.

Interrogate the data to find all the items where the Dcode is CUB or USA and the discount is Y .

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## Spreadsheets

## Show Formulas



| Total | Number | Average | Record |
| :---: | :---: | :---: | :---: |
| thrown | of throws |  | breaking |
| =SUMIF(E8:J8,">NT",E8:J8) | =COUNTIF(E8:J8,">NT") | =ROUND(L8/M8,1) | =IF(D8="Male",IF(K8>\$D\$3,"yes","no"), IF(K8>\$D\$4,"Yes","no")) |
| =SUMIF(E9:J9,">NT",E9:J9) | =COUNTIF(E9:J9,">NT") | =ROUND(L9/M9,1) | =IF(D9="Male",IF(K9>\$D\$3,"yes","no"),IF(K9>\$D\$4,"Yes","no")) |
| =SUMIF(E10:J10,">NT",E10:J10) | =COUNTIF(E10:J10,">NT") | =ROUND(L10/M10,1) | $=I F\left(D 10=" M a l e ", I F\left(K 10>\$ D \$ 3, " y e s^{\prime \prime}, " n o "\right), I F\left(K 10>\$ D \$ 4, " Y e s^{\prime \prime}, " n o "\right)\right)$ |
| =SUMIF(E11:J11, ">NT",E11:J11) | =COUNTIF(E11:J11,">NT") | =ROUND(L11/M11,1) | $=I F(D 11=$ "Male", IF(K11>\$D\$3,"yes","no"),IF(K11>\$D\$4,"Yes","no")) |
| =SUMIF(E12:J12,">NT",E12:J12) | =COUNTIF(E12:J12,">NT") | =ROUND(L12/M12,1) | $=\mathrm{IF}(\mathrm{D} 12=$ "Male", IF(K12>\$D\$3,"yes","no"),IF(K12>\$D\$4,"Yes","no")) |

Tip: Make you can see the full formula - you may have to adjust the column widths before you print.

To show formulas click on the formula tab and click on show formulas. To Return to normal view you have to click the Show Formulas Icon.

You will definitely be asked to print your formulas.

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## Spreadsheets

Printing \& Saving


Tip: Make sure you select the appropriate print settings.

Settings


Tip: Make sure all the columns fit to one page if requested.


Dame Satur

