

## Finding the MEDIAN

The MEDIAN is one type of average that we use when we are looking at data. To find the MEDIAN we ORDER the data (either from smallest to largest or vice versa) then find the MIDDLE VALUE.

You can use Excel to find the MEDIAN

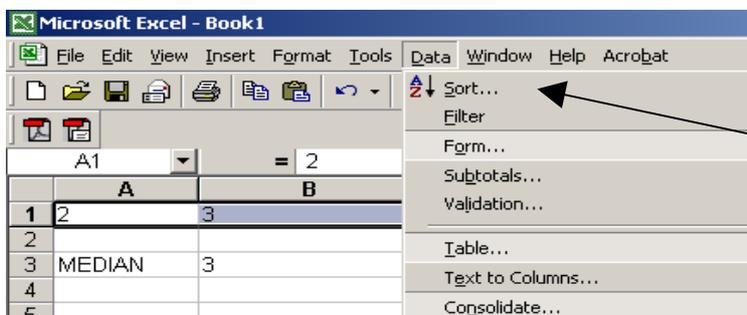
### Method 1

Copy the data into a new spreadsheet. (Use the Copy and Paste icons)

Highlight the data.

Click on DATA (from the MENU BAR) then SORT, then OK.

The data is now in order, find the middle value in the list and this is your median.



This is what you need to do

### Method 2

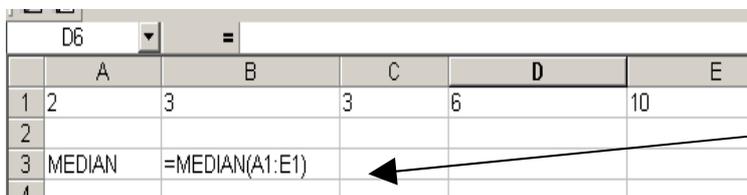
Using a similar example.

Click in the cell you want to put the MEDIAN into.

Type the formula `=MEDIAN(A1:E1)`

(This means find the median of the data from cell A1 to cell E1)

Press Enter

A screenshot of the Microsoft Excel spreadsheet. The formula bar at the top shows the formula `=MEDIAN(A1:E1)` being entered into cell D6. The spreadsheet below shows a table with five columns, A through E. Row 1 contains the numbers 2, 3, 3, 6, and 10 in columns A through E respectively. Row 3 contains the word 'MEDIAN' in column A and the formula `=MEDIAN(A1:E1)` in column B.

This is what it should look like

### Remember

The = sign tells Excel that you are about to do a sum or enter a formula.

Make sure you label your work so that you know what the data means.

## Finding the MEAN

The MEAN is one type of average that we use when we are looking at data. To find the MEAN we ADD together all the data and then DIVIDE by the of data values.

You can use Excel to find the MEAN

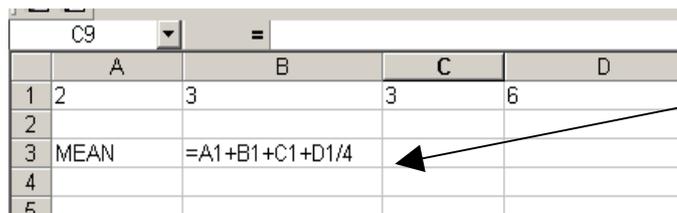
### Method 1

Say you want to find the mean of the data in cells A1,B1,C1, and D1

Click on the cell you want to put the MEAN into (label it!)

Type the formula  $=A1+B1+C1+D1/4$

Press ENTER



The screenshot shows an Excel spreadsheet with columns A, B, C, and D. Row 1 contains values 2, 3, 3, and 6. Row 3 is labeled 'MEAN' in column A, and the formula  $=A1+B1+C1+D1/4$  is entered in column B. The formula bar at the top shows the active cell (C9) containing the formula.

	A	B	C	D
1	2	3	3	6
2				
3	MEAN	$=A1+B1+C1+D1/4$		
4				
5				

This is what it should look like

### Method 2

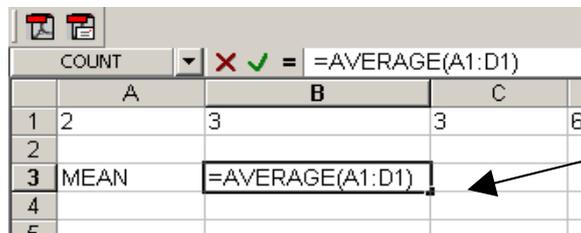
Using the same example.

Click on the cell you want to put the MEAN into.

Type the formula  $=AVERAGE(A1:D1)$

(This means find the average of the data from cell A1 to cell D1)

Press Enter



The screenshot shows an Excel spreadsheet with columns A, B, and C. Row 1 contains values 2, 3, and 3. Row 3 is labeled 'MEAN' in column A, and the formula  $=AVERAGE(A1:D1)$  is entered in column B. The formula bar at the top shows the active cell containing the formula.

	A	B	C
1	2	3	3
2			
3	MEAN	$=AVERAGE(A1:D1)$	
4			
5			

This is what it should look like

### REMEMBER:

- Excel uses the symbol / to mean divide.
- The = sign tells Excel you are about to do a sum or enter a formula.
- Make sure you label your work so that you know what the data means.

## Finding the MODE

The **MODE** is the value that appears the most times in a set of data.  
When finding the **MODE** you count the amount of times a number appears,  
the number with the highest value is the **MODE**.

You can use Excel to find the **MODE**

### Method

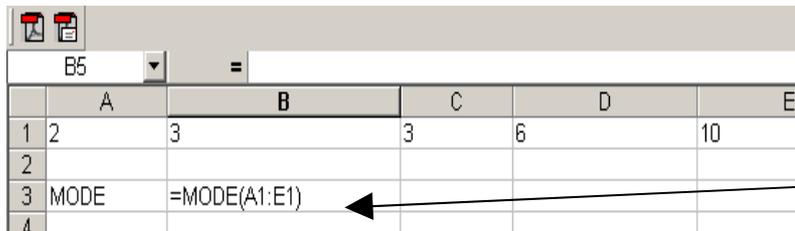
To find the **MODE** of the data in cells A1,B1,C1,D1 and E1

Click in the cell you want to put the **MODE** into.

Type the formula **=MODE(A1:E1)**

(This means find the modal value of the data from cell A1 to E1)

Press Enter



The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D	E
1	2	3	3	6	10
2					
3	MODE	=MODE(A1:E1)			
4					

An arrow points from the text box on the right to the formula cell B3.

This is what  
it should look  
like

### Remember

The **=** sign tells Excel that you are about to do a sum or enter a formula.

Make sure you label your work so that you know what the data means.

## Finding The RANGE

The RANGE describes the SPREAD of the data i.e. it is the DIFFERENCE between the LARGEST VALUE and the SMALLEST value in your data .

You can look at this as:

$$\text{RANGE} = \text{MAXimum Value} - \text{MINimum Value}$$

You can use Excel to find the RANGE

### Method

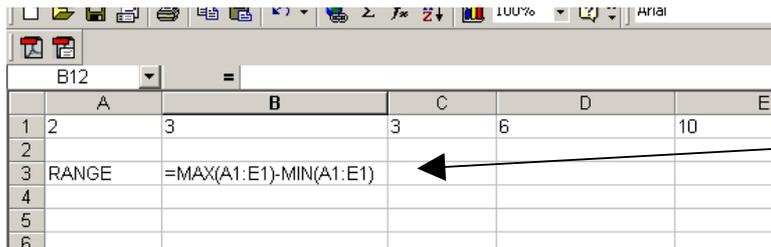
To find the RANGE of the data in cells A1, B1, C1, D1 and E1

Click in the cell you want to put the RANGE into.

Type the formula =MAX(A1:E1) - MIN(A1:E1)

(This means find the maximum value from cells A1 to E1 and subtract the minimum value from cells A1 to E1)

Press Enter



The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D	E
1	2	3	3	6	10
2					
3	RANGE	=MAX(A1:E1)-MIN(A1:E1)			
4					
5					
6					

An arrow points from a text box on the right to the formula cell B3.

This is what it should look like

### Remember

The = sign tells Excel that you are about to do a sum or enter a formula.

Make sure you label your work so that you know what the data means.