Working with survey data

When collating questionnaire responses, you will probably need to count the amount of responses that fall into various categories. Depending on the size of your sample, this can be a long process! Excel can be used to count responses and save you some time!
Example:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1						Respondent	1	2	3	4	5	6	7	8	9	10
2	***How many times have you visited the gallery?***						1	2	1	2	2	3	3	2	1	4
3	***Category Code***	1	2	3	4											
4		First visit	1 or 2 times	2 - 5 times	More than 5											
5	TOTALS															

In this example, 10 people have completed a questionnaire about visiting an art gallery. Each respondent is represented by a column (columns G to P). They were asked to put themselves into one of four categories relating to how many times they had visited the gallery. (First visit; 1 or 2 times; 2 – 5 times; More than 5). In this example, each of these categories has been given a code by the researcher:

First visit = category code **1**
1 or 2 times = category code **2**
2 – 5 times = category code **3**
More than 5 = category code **4**

The category code for each respondent's answer is then put in the appropriate column (see G2 to P2) e.g. respondent number 1 (column G) said this was their first visit to the gallery so a '1' is entered in cell G2.

You can use a formula to count how many responses there are in each category. In this example, for category 1 the formula will be entered in cell B5. The formula will appear as follows

=COUNTIF(G2:P2,1) This formula is telling the computer to count cells (=COUNTIF) if they appear in a certain range (G2:P2) and if they meet a certain criteria (1)

An alternative formula which could be used in this situation is

=COUNTIF(G2:P2,B3) This formula is telling the computer to count cells (=COUNTIF) if they appear in a certain range (G2:P2) and if they meet a certain criteria (whatever is displayed in cell B3 - in this case, the number 1). The second formula can be used on this particular worksheet as the category codes have been entered in cells B3 to E3.

If you were working out how many responses there were in category 2, you would enter the following formula in cell C5 **=COUNTIF(G2:P2,2)** or

=COUNTIF(G2:P2,C3)

Creating Pivot Tables with your data:

Example**:**

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1						Respondent	1	2	3	4	5	6	7	8	9	10
2	***How many times have you visited the gallery?***						1	2	1	2	2	3	3	2	1	4
3	***Category Code***	1	2	3	4											
4		First visit	1 or 2 times	2 - 5 times	More than 5											
5	TOTALS	3	4	2	1											
6	***What is your age?***						1	2	1	1	3	3	2	3	1	3
7	***Category Code***	1	2	3												
8		Under 18	18-40	41+												
9	TOTALS	4	2	4												

The table above shows the same data as before with an additional question also included (what is your age?). Displaying your data in this way allows you to see total responses in each category, however categories from different questions are not linked. If you use a Pivot Table, you can display data from more than one question at a time. For example, the table opposite shows total number of responses in each of the 'visits' categories for each age group.

To create a Pivot Table similar to the one opposite, you will need to delete any superfluous rows and columns in your worksheet so that there are no gaps or unnecessary text; it will look similar to the data below.

Count of Visits				
	Under 18	**18-40**	**41+**	**Grand Total**
First visit	3			3
1 or 2 times	1	1	2	4
2-5 times		1	1	2
More than 5			1	1
Grand Total	**4**	**2**	**4**	**10**

Respondent	1	2	3	4	5	6	7	8	9	10
Visits	1	2	1	2	2	3	3	2	1	4
Age	1	2	1	1	3	3	2	3	1	3

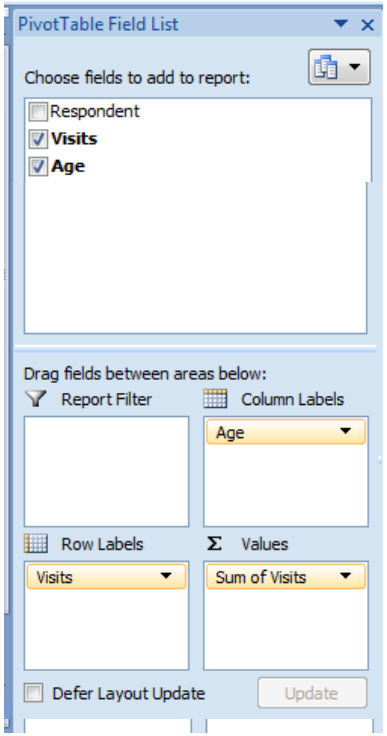
A pivot table uses **column** headings as categories. If the categories you are interested in are row headings (as in the example above) you will have to transpose your data (switch from rows to columns). Highlight the data, go to **copy** then in a new worksheet click on the bottom half of the **paste** button. Select **transpose** from the menu that appears.

You data will now look like this

Respondent	Visits	Age
1	1	1
2	2	2
3	1	1
4	2	1
5	2	3
6	3	3
7	3	2
8	2	3
9	1	1
10	4	3

To insert your Pivot Table, ensure the correct data is selected and go to **Insert** > **Pivot table** then confirm your data selection (click **OK**). The Pivot Table tools will appear on the right of your screen. First you need to select the fields you will be using from the top section of the box and insert these in the correct area in the bottom section.

For instance, we will be comparing **Visits** and **Age**, so will click on the **Visits** heading in the top section and drag it to the **Row Labels** section below. Then we click on the **Age** heading in the top section and drag it to the **Column Labels** section below. Finally we click and drag **Visits** again to the **Values** section.



You will notice that **Sum of Visits** is automatically displayed under values. This means that Excel sees your category codes as values instead of codes and tries to add them up; this will make your table incorrect. Click on the arrow next to **Sum of Visits**, go to **Value field settings** and select **Count**. This means Excel counts the instances of each number, rather than seeing them as values to add up. If you have not given your categories numbers as codes (maybe you have given them letters) you will not need to worry about this.

Your Pivot Table is now almost complete, however you may wish to rename the column and row headings so they are more meaningful (i.e. replace the category codes with the original questionnaire response categories).

Count of Visits	**Column Labels**			
Row Labels	**1**	**2**	**3**	**Grand Total**
1	3			3
2	1	1	2	4
3		1	1	2
4			1	1
Grand Total	**4**	**2**	**4**	**10**

The finished Pivot Table

Count of Visits				
	Under 18	**18-40**	**41+**	**Grand Total**
First visit	3			3
1 or 2 times	1	1	2	4
2-5 times		1	1	2
More than 5			1	1
Grand Total	**4**	**2**	**4**	**10**

The finished table with the categories renamed to reflect original response categories