

Histograms

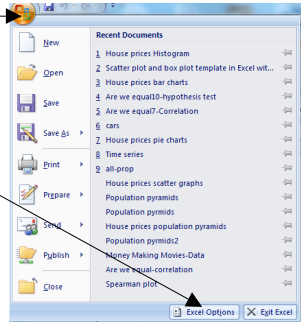
These instructions should be used together with the spreadsheet, House prices Histogram.xls.

Open this spreadsheet.

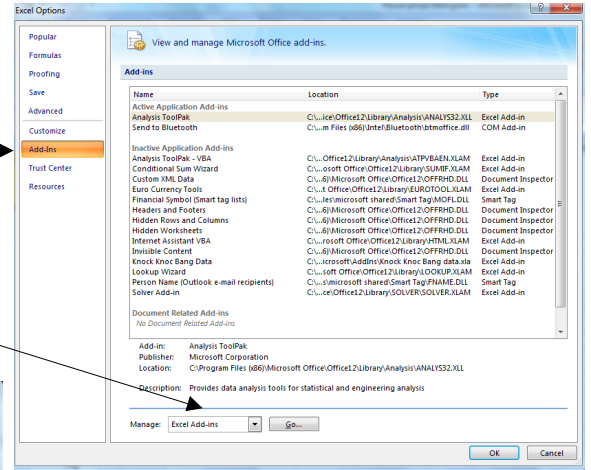
First you must make sure the **Data Analysis Toolpak** is in Excel.

If not: Click on the **Office Button**

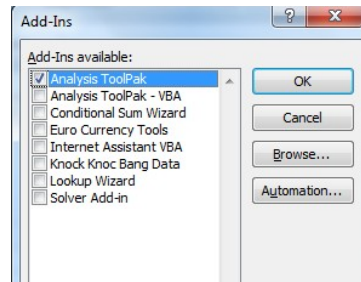
Select **Excel Options**



Then **Add-Ins**



Make sure **Excel Add-ins** is in **Manage** then **Go**



Tick **Analysis ToolPak** then **OK**

This will appear in the **Data** tab.

Next use the **Min** and **Max** functions in **C1** and **C2** to find the minimum and maximum values of the data so we can decide on the values of the bins.

	A	B	C	B	C
	House Prices South of England £1,000s				
1		Min	=MIN(A:A)	Min	50
2	325	Max	=MAX(A:A)	Max	480
3	145				
4	230				
5	100				
6	100				
7	200				
8	200				
9	187				
10	386				
11	475				
12	166				

The bins in Excel are the upper boundaries and lower limits of each group.

We will use bins 50, 100, 150, ...

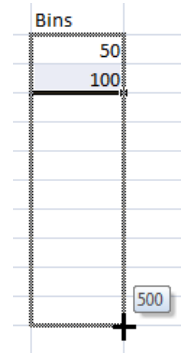
Select **E1** and type in **Bins**

Select **E2** and enter **50**. Select **E3** and enter **100**

Select **E2:E3** take the cursor to the bottom right hand corner of **E3** until you see a small cross the click and drag This will drag the pattern Stop at **500**.

Plot the histogram.

Click on **Data** tab then **Data Analysis** then **Histogram** and **OK**



Select **Input Range** (by clicking into the box) then select the data - **column A or A1:A60**

Select **Bin Range** then **E1:E11**

Tick **Labels** so B1 and E1 will be recognised as text and not number.

Select **Output Range** then select **G1**

Tick **Chart Output** then **OK**

The output graph is not a histogram as it has gaps and it is not labelled properly.

Remove **Frequency Legend** by clicking on it and then **delete**

Close the gaps between the columns and add column border.

Right click on a bar then select **Format Data Series** then **Series Options**

Close **Gap width** to 0 % then select **Border Color** then **Solid line** open the **color selection** and choose **black** and **Close**

Labelling

Click on **horizontal axis** then type in **House prices (£1,000s)** then **Enter**

Vertical axis is fine.

Click on **title** then type in **House prices for an area in the South of England** then **Enter**

When Excel processes this histogram function it will count how many house prices are greater than zero and less than or equal to 50 and enter the count into G2, and so on for each bin. We need to show this on the scale on the x-axis. A number in brackets shows this is a limit and that the exact value is not included in the column.

Correct the scale on the horizontal axis.

Select **G2** and type **(0)-50** then **Enter**

Select **G3** and type **(50)-100** then **Enter** and so on

Select **G12:H12** and **delete**

