# Fathom<sup>™</sup>

Fathom<sup>™</sup> is a dynamic statistical software package. It will allow you to enter, modify, graph, and analyse data. The following overview will provide you with what you need to use  $Fathom^{TM}$ . The instructions work for  $Fathom^{TM}$  1 and  $Fathom^{TM}$  2. Screens shown here were created using  $Fathom^{TM}$  1.

## Start Fathom™

To access *Fathom*™, double-click the *Fathom*™ icon **.** This is located either on your desktop or on the **Start** menu.

## The Menu Bar

The menu bar contains all the standard  $Fathom^{TM}$  functions.

### File Menu

Use this menu to open and save a *Fathom*™ document.



### The Tool Shelf

#### **Edit Menu**

Use this menu to copy or cut selected items, and to paste previously copied items. You can also use this menu to undo operations you have performed in  $Fathom^{TM}$ .

The toolbar contains icons of the key objects. You can place new objects in the workspace by clicking on the desired icon, and dragging.

#### Case Table

To create and enter data into a case table:

- drag the Case Table icon from the Tool Shelf into the workspace
- click <new>. Type the attribute name you would like for the data, and press enter. The example used Marks.
- click in the box below the name, enter your data, and press enter
- continue until you have entered all the data items.

## **Collection Box**

As you enter data into the case table, a small treasure chest will appear automatically and fill with gold balls. This is called a **Collection Box**. Each gold ball represents one row of data in the collection box.



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## **Graph Box**

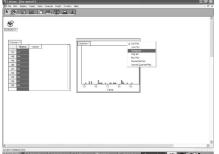
To create a graph of the data you have entered:

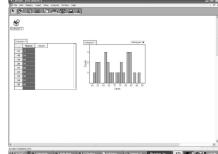
- Drag the **Graph** icon from the **Tool Shelf** into the workspace.
- Place the cursor over the name attribute you gave your data. The cursor will change to a hand. Click and the hand will change to a fist; all the data will be highlighted.
- Drag the fist over to the **Drop an attribute here** line, which is along the horizontal axis of the graph. Let go of the mouse button.



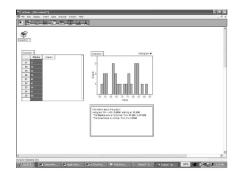
 A dot plot of the data will appear. To change this to a histogram, click the words "dot plot" in the right corner of the graph box and select histogram from the list.







• To change the appearance of your graph, double-click the body of the graph. An information box will appear. You can edit any item that is in blue.





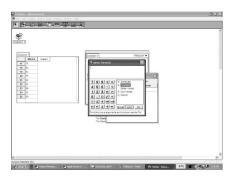
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## To Find the Mean and Median

### Mean

- Right-click either the graph or the case table, and click **Inspect Collection** on the pop-up menu.
- On the Measure tab, click <new>, and type Mean.
- Right-click under the formula heading, and click
   Edit Formula on the pop-up menu.
- A box resembling a calculator will appear. Click the

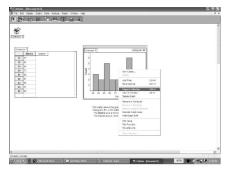
   next to Function, then the + next to Statistical, and
   finally the + next to One Attribute.

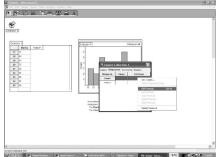


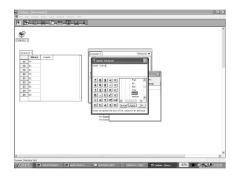
- Scroll down the list of functions, and double-click
   Mean. The word mean, followed by a pair of brackets, will appear in the display.
- Type the name of the attribute inside the brackets. Click OK.

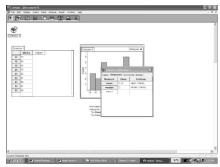
### Median

- Click <new> under Mean, and type Median.
- Follow the above steps, beginning with "Right-click under the Formula heading...." This time, enter **median**.









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## **Sorting to Find the Mode**

- Right-click the name attribute of your data. The data will be highlighted.
- Right-click the highlighted data, and click either Sort Ascending or Sort Descending.
- To find the mode, scan your data list for repeated values. The value that repeats the most often will be your mode.

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## **Helping Hints**

- If you make an error, you can use the **Undo** command on the **Edit** menu to undo as many steps as you need to correct the error.
- You can move **Case Table**, graphs, or any other object in the workspace by clicking the object and dragging it.
- If you click a single set of attributes in a histogram, the set will turn red. If you look in the **Case Table**, all the data items from that set will be highlighted blue.