Fathom™

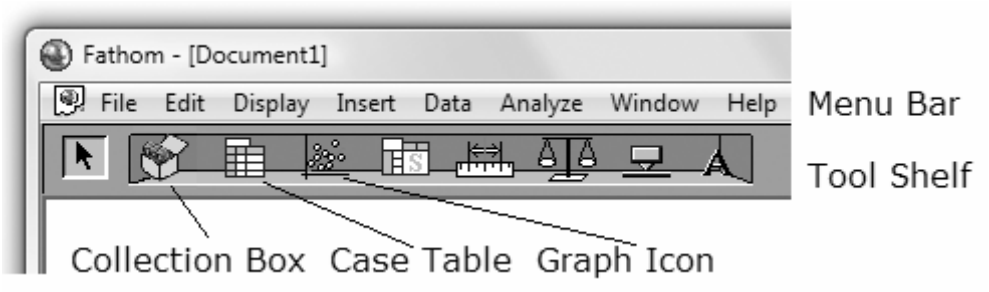
Fathom™ is a dynamic statistical software package. It will allow you to enter, modify, graph, and analyse data. The following overview will provide you with what you need to use *Fathom*™. The instructions work for *Fathom*™ 1 and *Fathom*™ 2. Screens shown here were created using *Fathom*™ 1.

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*™ functions.



File Menu

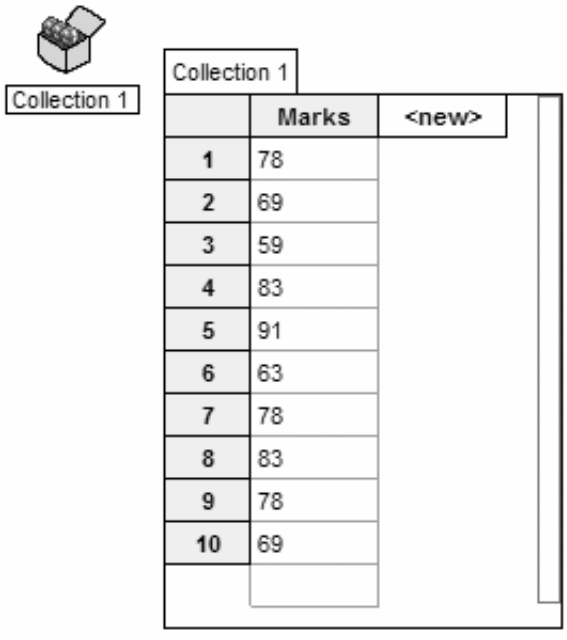
Use this menu to open and save a *Fathom*™ document.

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*™.

The Tool Shelf

The **Tool Shelf** contains icons of the key objects. You can place new objects in the workspace by clicking on the desired icon and dragging to the workspace.



Case Table

To create and enter data into a case table:

- Drag the **Case Table** icon into the workspace.
- Click **<new>**. Type the attribute name you would like for the data, such as Marks, and press **Enter**.
- Click in the box beside 1, type the data, and press **Enter**.
- Continue until you have entered all the data items.

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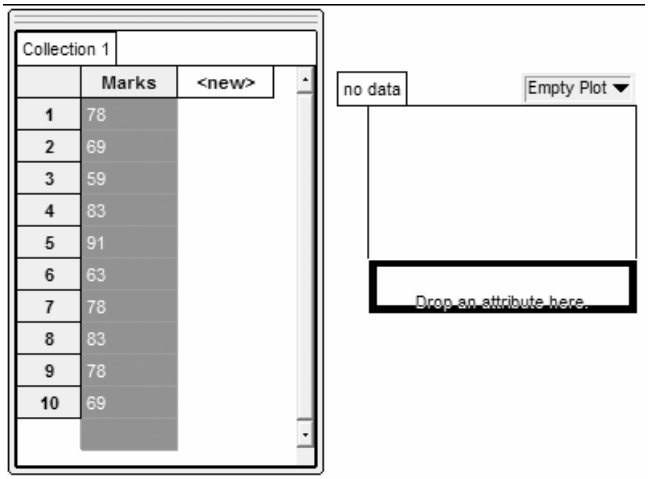
Collection Box

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.

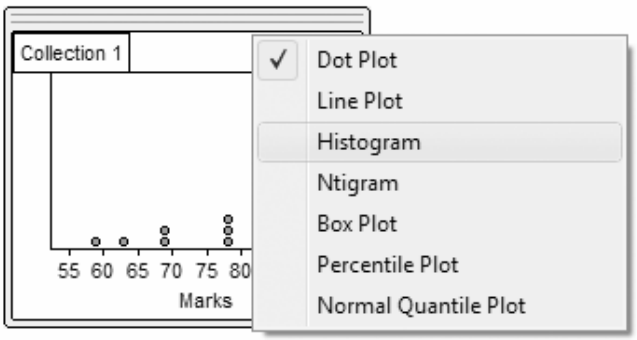
Graph Box

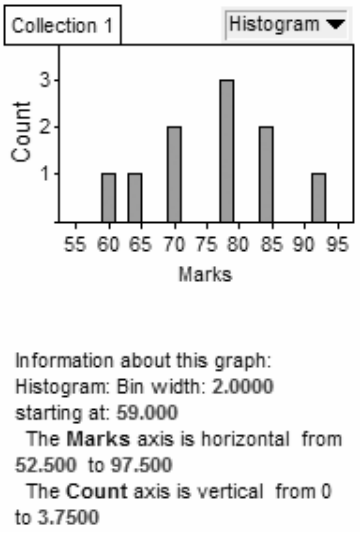
To create a graph of the data you have entered:

- 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.
- 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 displayed in blue.





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To Find the Mean and Median

Mean

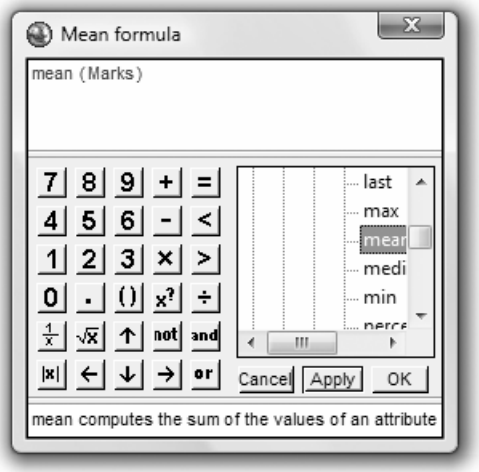
- Right-click either the graph or the case table.
- Click **Inspect Collection** on the pop-up menu.
- On the **Measure** tab, click **<new>**, and type Mean.
- Right-click under the formula heading, and click **Edit Formula** on the pop-up menu.

A box resembling a calculator will appear.

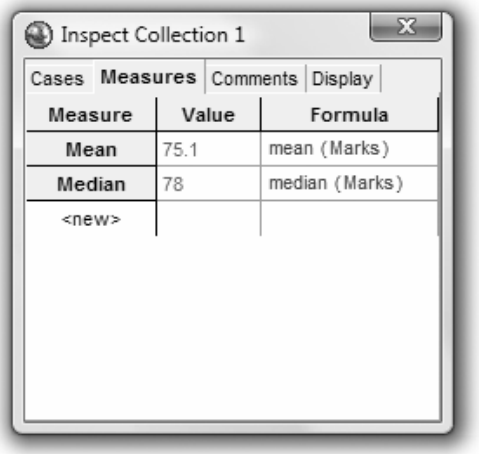
- Click the + next to **Function**, then the + next to **Statistical**, and finally the + next to **One Attribute**.
- Scroll down the list of functions, and double-click **mean**.

The word *mean*, followed by a pair of brackets, will appear in the display.

- Type the name of the attribute, Marks, inside the brackets. Click **OK**.



Median



- Click **<new>** under Mean, and type Median.
- Right-click under the formula heading, and click **Edit Formula** on the pop-up menu.
- 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 **median**.

The word *median*, followed by a pair of brackets, will appear in the display.

- Type the name of the attribute, Marks, inside the brackets. Click **OK**.

The mean and median of the attribute, Marks, will be displayed.

Note: Instead of selecting a function such as **mean( )** from the menu, you can type the name with the brackets.

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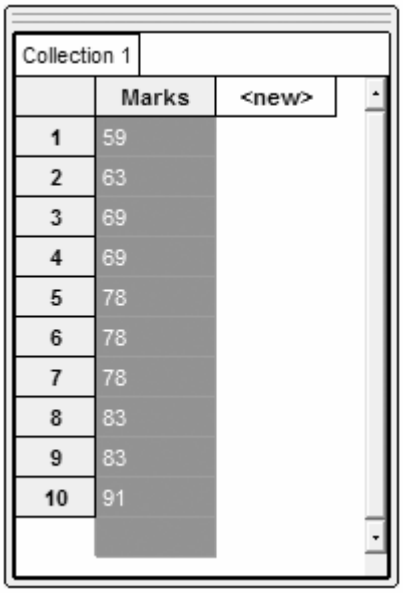
Sorting to Find the Mode



- Right-click the Marks attribute.

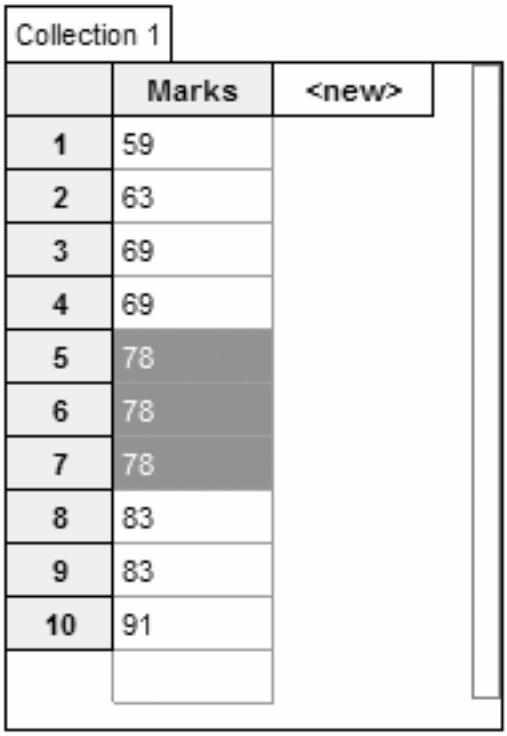
The data will be highlighted, and a menu will appear.

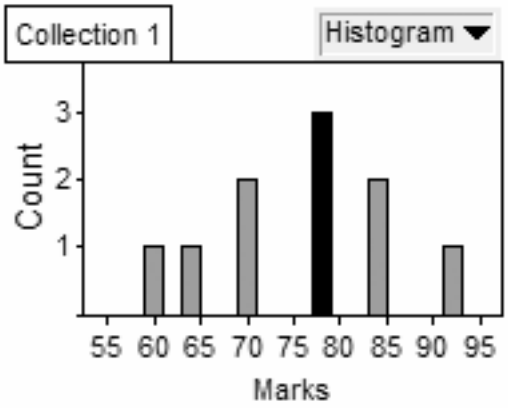
- Click either **Sort Ascending** or **Sort Descending**.
- To find the mode, scan the data list for repeated values.

The value that repeats the most often is the mode. In this example, the mode is 78.

Notes:

- If you make an error, you can use the **Undo** command on the **Edit** menu to undo as many steps as necessary to correct the error.
- You can move case tables, graphs, and other objects in the workspace by clicking on the object and dragging it.
- If you click a single set of an attribute 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.





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