A Fathom Document Window

This collection has data about the planets. Double-click the collection to show its inspector. Create objects by dragging them from the shelf and dropping them in the document. Point at something and read about it in the status bar.

Status bar

Adjust the slider to dynamically change the plotted function.

Use the text object to document your work and explain your results.

Common Keyboard Shortcuts

<table>
<thead>
<tr>
<th>Command</th>
<th>Win</th>
<th>Mac</th>
<th>Command</th>
<th>Win</th>
<th>Mac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undo</td>
<td>Ctrl+Z</td>
<td>⌘+Z</td>
<td>Duplicate Object</td>
<td>Ctrl+D</td>
<td>⌘+D</td>
</tr>
<tr>
<td>Redo</td>
<td>Ctrl+R</td>
<td>⌘+R</td>
<td>Move object 5 pixels</td>
<td>Arrow keys</td>
<td>Arrow keys</td>
</tr>
<tr>
<td>Inspect Object</td>
<td>Ctrl+I</td>
<td>⌘+I</td>
<td>Rerandomize</td>
<td>Ctrl+Y</td>
<td>⌘+Y</td>
</tr>
<tr>
<td>Add/Remove Filter</td>
<td>Ctrl+F</td>
<td>⌘+F</td>
<td>Create Case Table</td>
<td>Ctrl+T</td>
<td>⌘+T</td>
</tr>
</tbody>
</table>

To learn more about any feature, search Fathom Help.
**Collection**

The *collection* contains the data (deleting it will delete your data). There are several types of collections. The most common ones are shown here.

- **Empty (no cases)**

  Double-click to show the inspector.

- **Double-click to rename (the name appears in all objects displaying the collection).**

- **Iconified (shrunk) with data**

  An *experiment collection* collects data from sliders and Vernier sensors. Sensors are not included with Fathom.

- **Open with data**

  Each case is represented by a gold ball. You can change the case images and captions in the *Display* panel of the collection’s inspector.

- **Sample of Chicago**

  A *sample collection* samples cases from another collection.

- **Measures from Chicago**

  A *measures collection* collects statistics from another collection.

- **Wrist and Arm Spans**

  A *survey collection* collects data through the Fathom Surveys website, an online subscription service.

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**Inspector**

Use the inspector to control properties of an object. Inspect an object by double-clicking it.

- **Collection inspector open to the *Cases* panel.**

  Double-click to write or edit a formula to define an attribute.

- **Assign or remove a *category set* to control how the attribute behaves.**

  Click to edit a value.

- **Click to scroll through the cases.**

  Enter a unit to apply it to the selected attribute.
Use the **Microdata**, **Survey**, and **Experiment** panels of the collection inspector to import data into Fathom.

Choose **File | Import | U.S. Census Data** to import data on individuals; control the import in this panel.

Click to add multiple-choice answers.

Click to upload to the Fathom Surveys website.

**Collection inspector open to the Measures panel**

Define measures (collection attributes) here to collect measures, thereby building up a sampling distribution.

**Sample panel of a sample collection, used to control the sampling process**

Double-click to show the formula editor. Enter a formula to sample cases until some condition is met, such as `coinFlip = "heads"`. 

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**Inspector** *(continued)*

Type survey questions.

Type instructions for the survey.
**Formula Editor**

Double-click a formula or a formula cell to show its formula editor.

Enter your formula by typing, clicking buttons, or double-clicking items from the list.

Change font size of the formula.

Hold down **Alt** (Win) **Opt** (Mac) to see alternate buttons.

Resize a pane by dragging its edge.

Select an item in the list and read about it in the bottom pane.

**Slider**

A *slider* contains a value that dynamically updates and is usually a parameter in a formula.

Click to rename. Click to edit value.

Click to animate. Drag to change value.

Drag to a collection to create an experiment.

**Meter**

A *meter* displays the value of a sensor and is used to collect data in an experiment.

Click to rename. Click to zero the meter.

Drag axis to rescale; double-click axis to show inspector.

Drag to a collection to create an experiment.

Edit to control animation speed.

Edit to restrict the slider’s value to multiples of the value you enter.
**Case Table**

Enter data into a case table to create a collection from scratch. Each row represents one case. Each column represents one attribute.

Units row (choose Show/Hide Units Row from the Table menu): Enter the name or abbreviation for a unit to apply it to the attribute. Delete it before trying to change it.

Formula row (choose Show/Hide Formula Row from the Table menu): Double-click to add or edit a formula.

**Graph**

Drop an attribute name onto an axis to graph. Hold down the Shift key to force categorical behavior, or the Option key to force numeric behavior.

Drag a name to reorder categorical values on the axis.

A plotted value: The mean for each group appears as a line; the mean for the whole collection appears here.

Add multiple attributes by dropping them onto the plus sign.

**Zoom In:** Ctrl+click (Win) Option+click (Mac)

**Zoom Out:** Ctrl+Shift+click (Win) Option+Shift+click (Mac)
Summary Table

Drop attributes to add.

Drop attributes to replace. Hold down the Shift key to force categorical behavior, or the Option key to force numeric behavior.

Select a formula to highlight its results.

Add formulas using the Summary menu. (A summary table with no attributes can also be used as a calculator.)

Statistical Objects

Display results of statistical procedures: Use to estimate population parameters and compute confidence intervals, test hypotheses, or build linear models.

Drop attribute(s) to compute results from raw data.

Edit values to compute results from summary data.

Choose from pop-up menu to perform a one-sided test.

Choose type of analysis.

Change results to standard output by unchecking Verbose in the Test menu.

Blue text is editable.