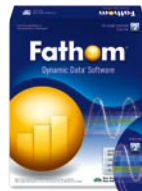


Fathom™

Dynamic Data™ Software

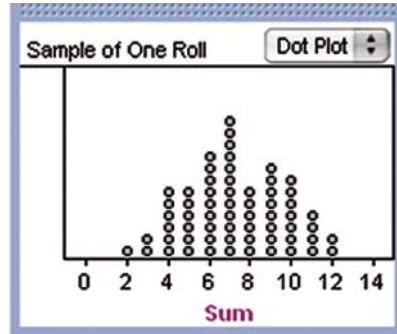


GET EXCITED ABOUT DATA EXPLORATION!

Fathom enables and motivates your students to gather, graph, analyse and animate data of all kinds.

Relate your studies to real-world examples and understand the concepts as never before! Fathom 2 enhances learning from algebra to calculus, statistics, and beyond.

Fathom 2's new full-colour design makes it easier than ever for your students to identify patterns and make sense of data.



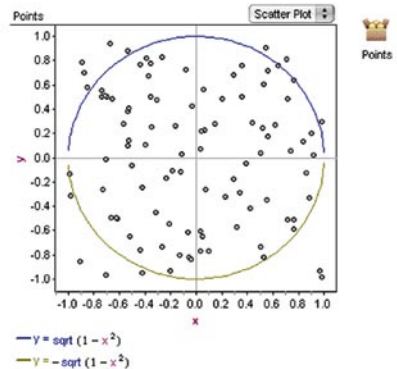
[Below:] Estimating π

So you have a square 2 units on a side. Inside the square you draw a circle that just fits.

Now you choose points at random from within the square. Some points will lie within the circle and some will not.

This situation is depicted in the graph below.

How can you use this to get an estimate of π ?



Take control of your data

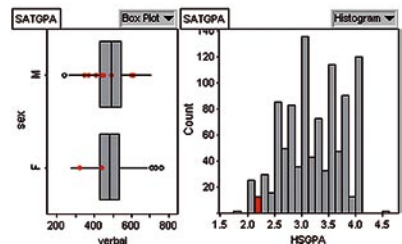
- Drag the data or add some, or just select it. Every representation and calculation updates automatically.
- Drag and drop to build new graphs, tables, and collections of data.
- Easily change graph types, rescale axes, or zoom in to identify an outlier. Fit regression lines and make residual plots automatically.

Build simulations and explore

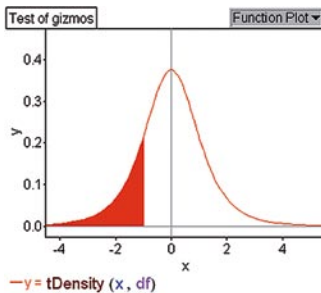
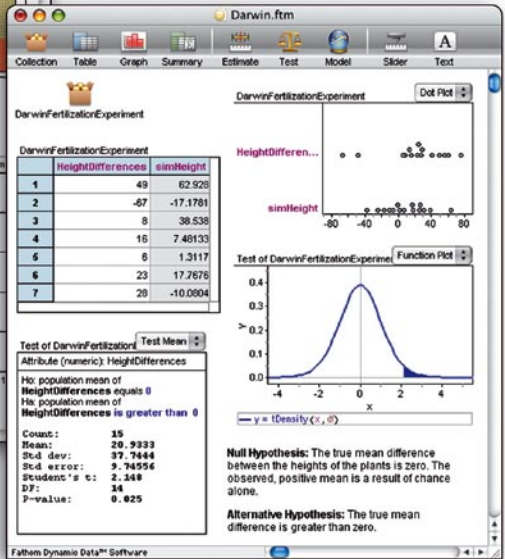
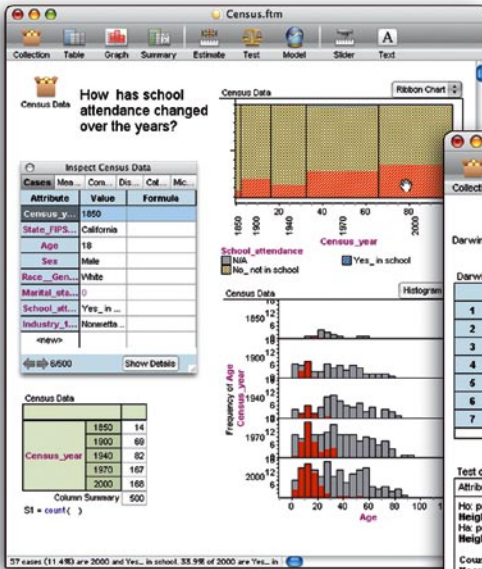
- Use sliders as variable parameters to fit functions to data.
- Use any of the more than 100 built-in functions, or create your own formulas.
- Define units for attributes, sliders, and formulas. Fathom converts units and does unit algebra automatically.

Investigate interesting data

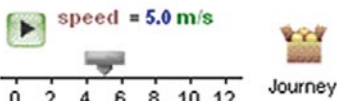
- Fathom comes with more than 300 data sets for you to explore, from science to arts to sports.
- Easily download data from the internet or import it from other programs.
- Easily import data from any source, such as the UK Census at School project from the Royal Statistical Society, U.S. census microdata from 1850 to 2000, World Cup data, etc., included with program.



The power to visualise & explore all aspects of school/college data analysis and statistics



"The speed with which our students could produce results encouraged them to tackle the more challenging, and important, task of interpreting their result." - Evaluate Review



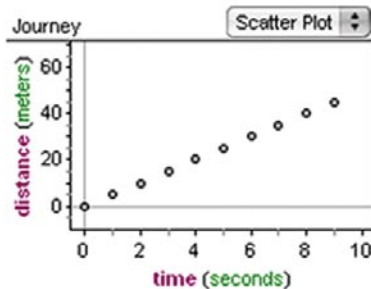
Sliders with units

Drag the slider "thumb" at left to change the value of speed.

Notice the the value has units and that they are used correctly in the computation of distance in the Journey collection.

Journey

	time	distance
=		speed*time
1	0 s	0 m
2	1 s	5 m
3	2 s	10 m
4	3 s	15 m



Supplement Fathom's excellent starter activities and guide books with the topic-focussed textbooks on page 37 - see the new "Exploring Statistics with Fathom" by Cindy Clements.

Version 2 is much easier to use

They've lowered barriers to getting started by dramatically improving the help system and adding one-minute movies that show basic skills. Colour coordination of key words throughout the program makes it easier to keep track of what's going on. They've made more than 100 small changes to the formula editor that make it much easier to use. And a new look makes Fathom beautiful!

Graphs! Since you can place more than one attribute on an axis, you can make a whole host of new graphs with the same drag-and-drop ease as before.

Get to the meaning of data and models with units and unit algebra.

Metres, fortnights, and watts are just 3 of the more than 90 units Fathom now understands, and can convert from one system to another, and use in algebraic formulas with simplification. If attributes have units, then units propagate everywhere from slopes of fitted lines to summary statistics.

Even more data, even more easily accessible.

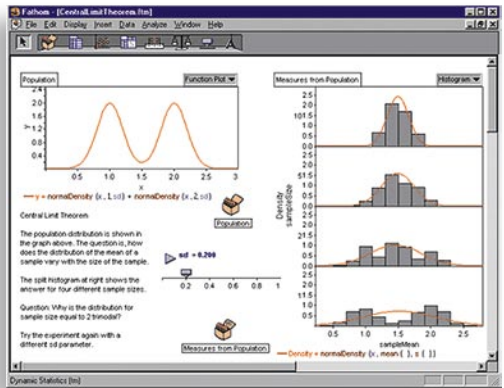
Access U.S. census microdata from 1850 to 2000 with your choice of more than 50 attributes. There are more than 100 new sample documents, and all 329 sample documents are listed with descriptions in the help system, from which they can be opened directly. And the "URL-drop" method of importing data from web pages has been made to work even better and for an even wider variety of sites. Finally, when you have collections that need "joining," a single drag and drop accomplishes the task!

Text formatting, complete with mathematical typesetting.

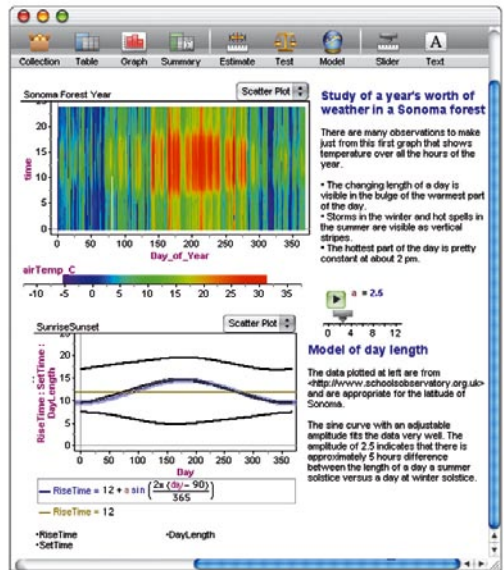
Fathom includes the text editor that comes with The Geometer's Sketchpad Version 4, allowing you to format your annotations as you see fit, including font, colour, symbols, fractions, and more.

New statistical capabilities.

Add five-number summaries to a summary table by menu command. Easily create correlation matrices by dragging multiple, continuous attributes to summary tables. Use the new Linear Model tool to create both simple and



[Above:] Central Limit Theorem simulation

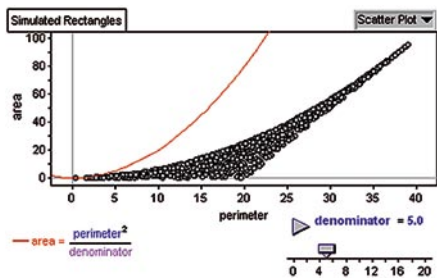


Create complete coursework reports within Fathom

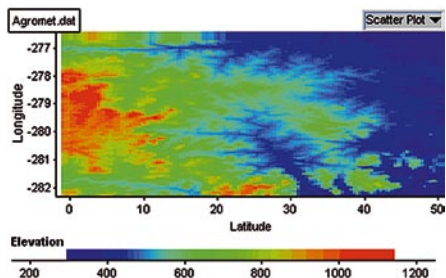
multiple regression models. Use new functions such as `linRegrPredicted` and `logRelativeError` to create even more compelling visualisations. And, with a host of new graphing capabilities, go on even deeper explorations of data that Fathom 2 has made even easier to acquire.

Even More Reasons!

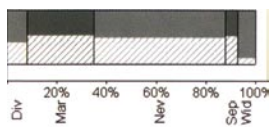
There are many more changes and additions to Fathom 2 that make it easier to use and more powerful. Learn more about Fathom 2's new capabilities for Data, Graphs, Summary Tables, Formulas and the Formula Editor, and Statistical Objects, plus other miscellaneous improvements on our website, where teachers can download a free trial.



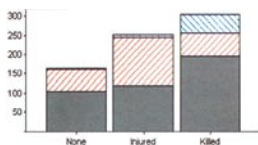
A scatter plot of the area versus perimeter of random rectangles shows surprising relationships.



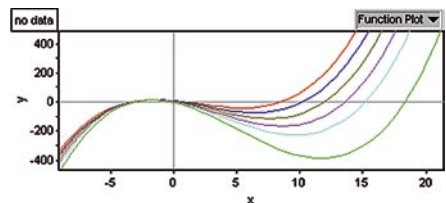
A colour scatter plot shows elevation data



Split Ribbon Chart
Compare proportions of subgroups within groups



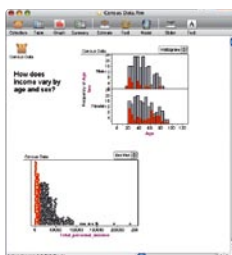
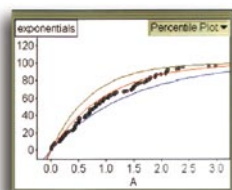
Split Bar Chart
Compare counts for groups and subgroups



$$y = \frac{x^3}{3} + (-2)(x+2)^2 + 15$$

$$y = \frac{x^3}{3} + (-\text{Coeff})(x+2)^2 + 15$$

Plotted functions can be dynamically manipulated. Control parameters with sliders



WHAT DID TEACHERS SAY ABOUT FATHOM VERSION 1?

EVALUATE: “This product’s strength lies in its **speed and flexibility**. It is **very easy** to change data in Fathom: students can see what happens when outliers are added or removed, since the graphs and summary statistics change instantly when data items are changed. Fathom allows students to test hypotheses and investigate “what if” questions successfully. The speed with which our students could produce results encouraged them to tackle the more challenging, and important, task of interpreting their result.”

SCHOOLZONE: “Fathom is an **excellent** tool that enables the analysis of a wide variety of data.” “Lends itself amicably to support **Key Stage 4** National Curriculum, Data Handling, including providing a suitable medium to aid the completion of GCSE Data Handling coursework.”

TEEM: “It comes with a wide range of support material that is **well designed and easy to follow**. Used with an interactive whiteboard, this would be an **excellent** resource for teacher demonstrations or for working with small to large groups. It is relatively easy to design your own practical or problems to be solved, and data from the Internet and spreadsheets can be imported **easily**. Fathom supports problem solving using a wide range of functions, formulae and charts, including arithmetic, conditional, distributions, logical, random number, statistical, text and trigonometric functions, and bar charts, column, histogram, quantile plots, ribbon plots, scatter diagrams, split charts and cumulative frequency.”

Minimum System Requirements: Windows: Pentium or equivalent, Windows 98 or later, 32mb RAM, 150mb free disk space. Macintosh: PowerPC-based system, Mac OS 10.1.5 or later, 150mb free disk space. Published by Key Curriculum Press - inventors of The Geometer’s Sketchpad.

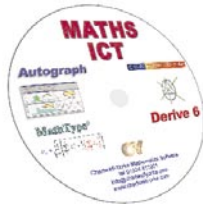
Prices: Single User £75 + vat, 10-User £159 + vat, 50-User Licence £350 + vat, Site Licence £475 + vat, Student Licence £19 + vat. Free demo on website and CD-ROM. Upgrades available.



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Please obtain an official Purchase Order number if your institution requires you to do so. We are happy to supply educational institutions with goods together with a 30-day invoice. Personal and overseas customers should send payment with order. Cheques should be payable to "Chartwell-Yorke Ltd." Visa, Mastercard, Solo, Maestro or American Express cards are welcomed.



**Free Trial
CD-ROM
available
to teachers**



Derive 6

Developing Number 2

Fathom™

FX MathPack



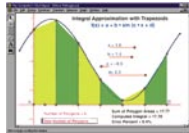
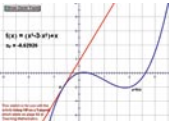
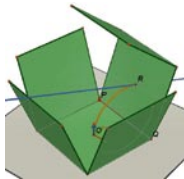
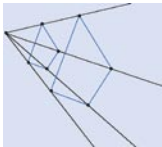
INTERACTIVE MATHEMATICS

MathType⁵

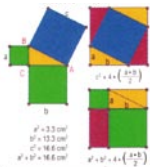
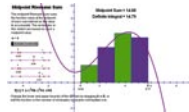
Mathematical Problem Solving

TinkerPlots

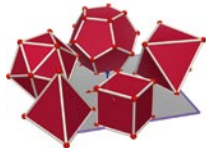
Teach A-Level Maths



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100



$$\sigma_x = \sqrt{\frac{1}{n} \left\{ \sum_{i=1}^n X_i^2 - \frac{1}{n} \left(\sum_{i=1}^n X_i \right)^2 \right\}}$$



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info@chartwellyorke.com <http://www.chartwellyorke.com>

