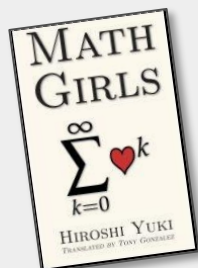




KEY STAGE 4 SUGGESTED READING LIST

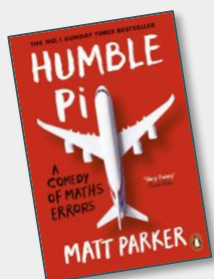
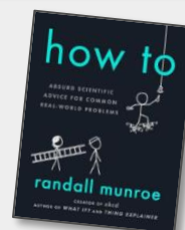


Math Girls by Hiroshi Yuki

Currently in its eighteenth printing in Japan, this best-selling novel is available in English at last. Combining mathematical rigor with light romance, Math Girls is a unique introduction to advanced mathematics, delivered through the eyes of three students as they learn to deal with problems seldom found in textbooks. Math Girls has something for everyone, from advanced high school students to math majors and educators.

How to by Randal Munroe

How To is a guide to the third kind of approach. It's full of highly impractical advice for everything from landing a plane to digging a hole. Bestselling author and cartoonist Randall Munroe explains how to predict the weather by analysing the pixels of your Facebook photos.

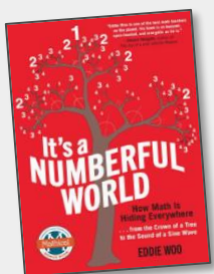
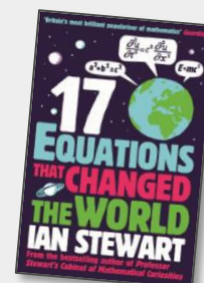


Humble Pi by Matt Parker

As Matt Parker shows us, our modern lives are built on maths: computer programmes, finance, engineering. And most of the time this maths works quietly behind the scenes, until ... it doesn't. Exploring and explaining a litany of glitches, near-misses and mishaps involving the internet, big data, elections, street signs, lotteries, the Roman empire and a hapless Olympic shooting team, Matt Parker shows us the bizarre ways maths trips us up, and what this reveals about its essential place in our world.

Seventeen Equations that Changed the World by Ian Stewart

From Newton's Law of Gravity to the Black-Scholes model used by bankers to predict the markets, equations, are everywhere -- and they are fundamental to everyday life. Seventeen Equations that Changed the World examines seventeen ground-breaking equations that have altered the course of human history. He explores how Pythagoras's Theorem led to GPS and Satnav; how logarithms are applied in architecture; why imaginary numbers were important in the development of the digital camera, and what is really going on with Schrödinger's cat.



It's a numberful world by Eddie Woo

Here are twenty-six bite-size chapters on the hidden mathematical marvels that encrypt our email, enchant our senses, and even keep us alive from the sine waves we hear as music to the mysterious golden ratio. This book will change your mind about what math can be. We are all born mathematicians and It's a Numberful World.

Game Theory by Brian Clegg

Brian Clegg was always fascinated by Isaac Asimov's classic Foundation series of books, in which the future is predicted using sophisticated mathematical modelling of human psychology and behaviour. Only much later did he realise that Asimov's 'psychohistory' had a real-world equivalent: game theory. Originating in the study of probabilistic gambling games that depend on a random source - the throw of a dice or the toss of a coin - game theory soon came to be applied to human interactions: essentially, what was the best strategy to win, whatever you were doing? Its mathematical techniques have been applied, with varying degrees of wisdom, to fields such as economics, evolution, and questions such as how to win a nuclear war.

