

# **Reading and Media Mathematics Recommendations**

## The Number Mysteries – Marcus du Sautoy



"Every time we download a song from iTunes, take a flight across the Atlantic or talk on our mobile phones, we are relying on great mathematical inventions. Maths may fail to provide answers to various of its own problems, but it can provide answers to problems that don't seem to be its own – how prime numbers are the key to Real Madrid's success, to secrets on the Internet and to the survival of insects in the forests of North America."

## Invisible Women – Caroline Criado Perez

"From government policy and medical research, to technology, workplaces, and the media. Invisible Women reveals how in a world built for and by men we are systematically ignoring half of the population, often with disastrous consequences. Caroline Criado Perez brings together for the first time an impressive range of case studies, stories and new research from across the world that illustrate the hidden ways in which women are forgotten, and the profound impact this has on us all."



## Algorithms of Oppression - Safiya Umoja Noble



"In Algorithms of Oppression, Safiya Umoja Noble challenges the idea that search engines like Google offer an equal playing field for all forms of ideas, identities, and activities. Data discrimination is a real social problem; Noble argues that the combination of private interests in promoting certain sites, along with the monopoly status of a relatively small number of Internet search engines, leads to a biased set of search algorithms that privilege whiteness and discriminate against people of colour, specifically women of colour."

#### The Narrow Corridor - Daron Acemoglu

"Liberty is hardly the "natural" order of things. In most places and at most times, the strong have dominated the weak and human freedom has been quashed by force or by customs and norms. Either states have been too weak to protect individuals from these threats, or states have been too strong for people to protect themselves from despotism. Liberty emerges only when a delicate and precarious balance is struck between state and society."





#### The Simpsons and their Mathematical Secrets – Simon Singh

"In The Simpsons and Their Mathematical Secrets, Simon Singh explains how the brilliant writers, some of the mathematicians, have smuggled in mathematical jokes throughout the cartoon's twenty-five year history, exploring everything from to Mersenne primes, from Euler's equation to the unsolved riddle of P vs. NP, from perfect numbers to narcissistic numbers, and much more."

#### 17 Equations that Changed the World – Ian Stewart and John Davey

"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."



#### Alex's Adventures in Numberland – Alex Bellos



"Mathematical ideas underpin just about everything in our lives: from the surprising geometry of the 50p piece to how probability can help you win in any casino. In search of weird and wonderful mathematical phenomena, Alex Bellos travels across the globe and meets the world's fastest mental calculators in Germany and a startlingly numerate chimpanzee in Japan."

#### Humble Pi – Matt Parker

"What makes a bridge wobble when it's not meant to? Billions of dollars mysteriously vanish into thin air? A building rock when its resonant frequency matches a gym class leaping to Snap's 1990 hit I've Got The Power? The answer is maths. Or, to be precise, what happens when maths goes wrong in the real world."

# Why Study Mathematics? – Vicky Neale

"This book, aimed at students, parents and teachers, explains in practical terms the range and scope of mathematics at university level and where it can lead in terms of careers or further study. It will enthuse the reader about the subject and answer the crucial questions that a college prospectus does not."

### Maths on the Back of an Envelope – Rob Eastaway

"How many cats are there in the world? What's the chance of winning the lottery twice? And just how long does it take to count to a million? This book is an insight into the world of Fermi estimation, using simple mathematical modelling to estimate... anything!" Rob Eastaway has written a number of other excellent books as well!

## **Podcasts and Films**

A Brief History of Mathematics

Mathematical Objects

More or Less: Behind the Stats

The Infinite Monkey Cage

The Numberphile Podcast

BBC Radio 4 – Simon Singh's Numbers

Hidden Figures The Man who knew Infinity School of Hard Sums The Future with Hannah Fry A Beautiful Mind









