Bibliography

Sorted by Call Number / Author.

003.54 DOM

The machine learning revolution -- The master algorithm -- Hume's problem of induction -- How does your brain learn? -- Evolution: nature's learning algorithm -- In the church of the Reverend Bayes -- You are what you resemble -- Learning without a teacher -- The pieces of the puzzle fall into place -- This is the world on machine learning. Algorithms increasingly run our lives. They find books, movies, jobs, and dates for us, manage our investments, and discover new drugs. More and more, these algorithms work by learning from the trails of data we leave in our newly digital world. Like curious children, they observe us, imitate, and experiment. And in the world's top research labs and universities, the race is on to invent the ultimate learning algorithm: one capable of discovering any knowledge from data, and doing anything we want, before we even ask.

510 BEL
Bellos, Alex, 1969-.

Every number tells a story -- The long tail of the law -- Love triangles -- Coneheads -- Bring on the revolution -- All about e -- The positive power of negative thinking -- Professor calculus -- The title of this chapter contains three errors -- Cell mates. "From triangles, rotations and power laws, to cones, curves and calculus, Alex takes you on a journey of mathematical discovery. He sifts through over 30,000 survey submissions to uncover the world's favorite number, and meets a mathematician who looks for universes in his garage. He attends the World Mathematical Congress in India, and visits the engineer who designed the first roller-coaster loop. Get hooked on math as Alex delves deep into humankind's turbulent relationship with numbers, and reveals how they have shaped the world we live in"--Provided by publisher.

510 BEN
Benjamin, Arthur.

The magic of numbers -- The magic of algebra -- The magic of 9 -- The magic of counting -- The magic of Fibonacci numbers -- The magic of proofs -- The magic of geometry -- The magic of \pi -- The magic of trigonometry -- The magic of i and e -- The magic of calculus -- The magic of infinity -- Aftermath. The Magic of Math is the math book you wish you had in school. Using a delightful assortment of examples--from ice cream scoops and poker hands to measuring mountains and making magic squares--this book empowers you to see the beauty, simplicity, and truly magical properties behind those formulas and equations that once left your head spinning. You'll learn the key ideas of classic areas of mathematics like arithmetic, algebra, geometry, trigonometry, and calculus, but you'll also have fun fooling around with Fibonacci numbers, investigating infinity, and marveling over mathematical magic tricks that will make you look like a math genius!.

510 ELL
Ellenberg, Jordan, 1971-.

In 'How Not to Be Wrong', Jordan Ellenberg shows us that math isn't confined to abstract incidents that never
occur in real life, but rather touches everything we do...p...pulls from history as well as from the latest theoretical developments to provide those not trained in math with the knowledge they need.

510 ELW


510 HAR


510 PAR

The zeroth chapter -- Can you digit? -- Making shapes -- Be there and be square -- Shape shifting -- Shapes: now in 3D -- Pack it up, pack it in -- Prime time -- Knot a problem -- Just for graphs -- The fourth dimension -- The algorithm method -- How to build a computer -- Number mash-ups -- Ridiculous shapes -- Higher dimensions -- Good data die hard -- Ridiculous numbers -- To infinity and beyond -- The subsequent chapter. A mathematician and comedian offers games, puzzles, and hands-on activities to help those with a fear of math understand and enjoy the logical tools and abstract concepts of the subject normally only accessible at college-level study.

523.1 TEG

Max Tegmark explains the physics, astronomy, and mathematics that are the foundation of his work, focusing on his hypothesis that physical reality is a mathematical structure and his theory of the ultimate multiverse.


Book I: The mind and consciousness -- Unlocking the mind -- Consciousness--a physicist's viewpoint -- Book II: Mind over matter -- Telepathy: a penny for your thoughts -- Telekinesis: mind controlling matter -- Memories and thoughts made to order -- Einstein's brain and enhancing our intelligence -- Book III: Altered consciousness -- In your dreams -- Can the mind be controlled? -- Altered states of consciousness -- The artificial mind and silicon consciousness -- Reverse engineering the brain -- The future: mind beyond matter -- The mind as pure energy -- The alien mind -- Concluding remarks. Examines research from the field of neuroscience and explores, from a philosophical perspective, the human brain and consciousness.


The brain and mathematics learning -- The power of mistakes and struggle -- The creativity and beauty in mathematics -- Creating mathematical mindsets: the importance of flexibility with numbers -- Rich mathematical tasks -- Mathematics and the path to equity -- From tracking to growth mindset grouping -- Assessment for a growth mindset -- Teaching mathematics for a growth mindset. There is a clear gap between what research has shown to work in teaching math and what happens in schools and at home. This book bridges that gap by turning research findings into practical activities and advice. Boaler translates Carol Dweck's concept of 'mindset' into math teaching and parenting strategies, showing how students can go from self-doubt to strong self-confidence, which is so important to math learning. Boaler reveals the steps that must be taken by schools and parents to improve math education for all.


A math-whiz from a trailer park discovers she's the only student capable of unravelling complex clues left by a serial killer who's systematically getting rid of her classmates.


Having been recently dumped for the nineteenth time by a girl named Katherine, recent high school graduate and former child prodigy Colin sets off on a road trip with his best friend to try to find some new direction in life while also trying to create a mathematical formula to explain his relationships.


American mathematician Jule Davidson, who seeks to debunk a conspiracy that Pythagoras has been reincarnated, works with Elmer Galway, a professor of classical history at Oxford who is on his own quest to locate an ancient scroll said to be written by Pythagoras, but in order to realize their goals the pair will have to work together to solve philosophical and mathematical puzzles.