

# How much math can you cover in five minutes?



**Quite a bit, if you have a good guide.**

This collection of one hundred short essays offers a tour through contemporary and everyday mathematics that is both entertaining and enlightening.



**Chapter 5**

**Loss Plus Loss Equals Win**

“Mathematics, and probability theory in particular, is chock full of surprising phenomena. When a result stands in stark contrast to general expectation, it is called a paradox.”

**Chapter 14**

**To Change or Not to Change? The Monty Hall Problem**

“The quizmaster then opens, say, door 3, behind which stands a goat. We now get to the point: The contestant is given the opportunity to change doors, in this case from door 1 to door 2. Should he accept the offer?”

**Chapter 27**

**Why Am I Always Standing in the Wrong Line?**

“Have you ever had the feeling that the other lines at the supermarket, tollbooth, or post office always move faster than the one you are standing in?”

**Chapter 39**

**Proof by Computer?**

“Today we are going to discuss a problem that borders on the philosophical, one that mathematicians are having to confront as technology develops ever more rapidly: under what circumstances can a mathematical assertion be said to have been definitively proved?”

**Chapter 50**

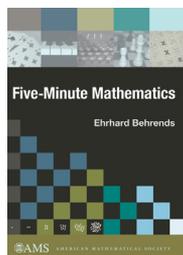
**Why We Invert Conditional Probabilities Incorrectly**

Evolution has prepared us well to estimate probabilities. In split seconds we evaluate a situation and decide: fight or flight? try to extinguish the flames or run to safety? We are also adept at understanding the effect of new information on the probability of some occurrence.

**Chapter 100**

**Mathematics Makes Billionaires**

“When Google went public, the founders Sergey Brin and Lawrence Page suddenly joined the ranks of the world’s wealthiest men.”



## Five-Minute Mathematics

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