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		How many real numbers are there?'Reality' of real numbers; Complex numbers; Construction of the Mandelbrot set; Platonic reality of mathematical concepts?; 4 TRUTH, PROOF, AND INSIGHT; Hilbert's programme for mathematics; Formal mathematical systems; Godel's theorem; Mathematical insight; Platonism or intuitionism?; Godel-type theorems from Turing's result; Recursively enumerable sets; Is the Mandelbrot set recursive?; Some examples of non-recursive

Sommario/riassunto	For many decades, the proponents of `artificial intelligence' have maintained that computers will soon be able to do everything that a human can do. In his bestselling work of popular science, Sir Roger Penrose takes us on a fascinating roller-coaster ride through the basic principles of physics, cosmology, mathematics, and philosophy to show that human thinking can never be emulated by a machine.