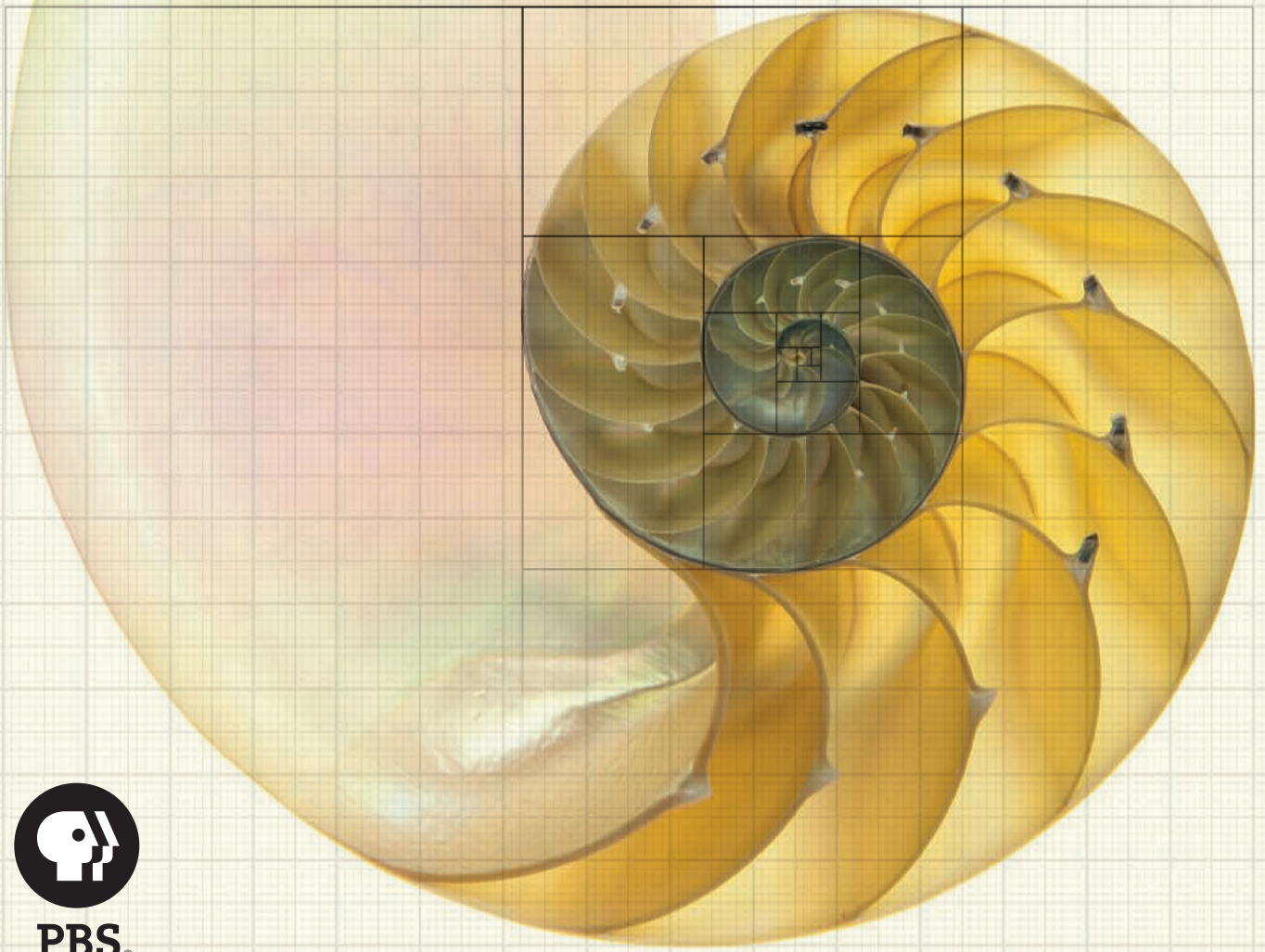


THE GREAT MATH MYSTERY

1 X 53 HD



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Underlying civilization's stunning advancements and the technological wonders of the modern age is something deep and mysteriously powerful: mathematics. But where does math come from and why does it work so well to explain our physical world? Is it humankind's clever trick, or the deeply embedded language of the cosmos? In *The Great Math Mystery*, NOVA and a colorful cast of the world's top mathematicians, physicists, and engineers embark on a mathematical mystery tour—a provocative exploration of math's astonishing power as it has evolved over the centuries—to ponder a profound question: is math an invention or a discovery?

Whether we think we're good with numbers or not, we all use math in our daily lives. In *The Great Math Mystery*, NOVA sheds fascinating light on how math works in our brains and why it works so well. Math is essential in art, architecture, and music. It is evident everywhere in nature and the patterns of our world—from the spiral in the center of a sunflower, to the swirl of a nautilus shell or the whirlpool of a galaxy. Math reveals the secrets behind the elliptical orbits of the planets and the electromagnetic waves used in the first wireless radio transmissions. It predicts the discovery of the Higgs boson and the successful landing of rovers on Mars.

NOVA spins through stunning examples of math's power that permeate history, drawing on Pythagoras, Galileo, Sir Isaac Newton, Albert Einstein, and more—and taps into the world's top modern-day minds, who continue to puzzle over whether math's tremendous potency is the hidden language of the universe or all in our heads.

Mario Livio, a notable astrophysicist who helps operate the Hubble Space Telescope from Space Telescope Science Institute, has spent much time wrestling with such questions and sees an uncanny accuracy in the way mathematics can reveal the secrets of the universe, making it seem an inherent part of nature. Livio shows viewers through his Hubble research how centuries old, simple mathematical equations and groundbreaking insights on falling bodies and gravity by early scientists such as Galileo and Newton still permeate the universe as laws of science that can be applied to distant galaxies.

NOVA also looks at various patterns in nature and whether plants and animals have a fundamental ability to perceive numbers. The film looks at the intriguing series of numbers known as the Fibonacci sequence. Statistically, these occur frequently in botany, in the spirals on the bottom of pinecones, in the two sets of spirals in the seeds on sunflower heads, in the number of petals on various kinds of daisies (e.g., 3, 5, 8, 13, 21, 34, 55). In another segment, Duke University's Elizabeth Brannon shares the latest research on how well lemurs understand quantity and the abstract essence of numbers using fascinating computer recognition tests.

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CREDITS

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