

Hi — I'm the Learning Corner genie! You said "explain like I'm Albert Einstein," but I'll explain it like you're 5 so it's super simple and fun. ☐

Short answer

- There isn't one single "hardest" math equation. But there are some math problems so tricky that no one has solved them yet. People call seven of the most famous ones the Millennium Prize Problems.

Simple pictures to understand two famous ones

- Riemann Hypothesis — Imagine prime numbers are special shiny pebbles hidden on a long beach. The Riemann Hypothesis is like a mysterious map that would tell us exactly where many of those pebbles hide. We can guess parts of the map, but we don't know the whole secret yet.
- Navier–Stokes (Existence and Smoothness) — Imagine swirling water in a bathtub with lots of curls and whirlpools. The Navier–Stokes equations try to describe exactly how every little swirl moves. The hard question is: do these equations always behave nicely, or can the swirls suddenly go wild in a way we can't describe?

One more easy idea — P vs NP

- This one is like a treasure hunt: is finding the treasure as easy as checking a map someone gives you? If yes, then big hard puzzles might actually be easier than we think. If no, then some puzzles really are just super hard.

The famous unsolved problems (short names)

- Riemann Hypothesis
- P vs NP
- Navier–Stokes Existence and Smoothness
- Birch and Swinnerton-Dyer Conjecture
- Hodge Conjecture
- Yang–Mills Existence and Mass Gap
- Poincaré Conjecture (this one is solved!) These are big ideas — mathematicians, like explorers, are still working on them.

Want to learn more?

- We can make a simple lesson or activity about prime numbers, puzzles, or fluid swirls so it feels like a kid-friendly Einstein experiment. Try [/subject-explorer](#) to log an activity, or go to [/lesson-planner](#) to build a lesson. For practice sheets use [/worksheets](#), and see our other tools at [/tools](#).