

THE TOP 10 MOST BEAUTIFUL THEOREMS

A 1988 poll of readers of the *Mathematical Intelligencer* ranked some of the most well-known theorems in mathematics thus:

- 1. Euler's identity

$$e^{i\pi} + 1 = 0$$

- 2. Euler's formula for a polyhedron

$$V + F = E + 2$$

- 3. There are infinitely many prime numbers (Euclid's proof)
- 4. There are only 5 regular polyhedra
- 5. The sum of the reciprocals of the squares of the positive integers is

$$\sum_{n=1}^{\infty} \frac{1}{n^2} = \frac{\pi^2}{6}$$

- 6. A continuous mapping of a closed unit disk into itself has a fixed point
- 7. The square root of 2 is irrational
- 8. π is a transcendental number
- 9. Every plane map can be colored with just 4 colors
- 10. Every prime number of the form $4n + 1$ is the sum of two square integers in only one way

References

David Wells, *The Penguin Book of Curious and Interesting Mathematics*. London, Penguin Books (1997), 126 - 127