



Radical Pi presents:

Formulary of Beautiful Formulas

by Professor Vitaly Bergelson

One cannot escape the feeling that these mathematical formulae have an independent existence and an intelligence of their own, that they are wiser than we are, wiser even than their discoverers, that we get more out of them than we originally put in to them.

$$\int_{-\infty}^{\infty} e^{-x^2} dx = \sqrt{\pi}$$

---- Heinrich Hertz

I think that mathematics is very much like poetry. I think that what makes a good poem—a great poem—is that there is a large amount of thought expressed in very few words. In this sense formulas are like poems.

---- Lipman Bers

$$\frac{4}{\pi} = 1 + \frac{1^2}{2 + \frac{1^2}{2 + \frac{5^2}{2 + \frac{7^2}{2 + \dots}}}}$$

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

Wednesday, Sept 9, 5 PM
Undergraduate Math Study Space (MA 052)

Free pizza!

$$\pi = 4 \arctan\left(\frac{1}{5}\right) - \arctan\left(\frac{1}{239}\right)$$

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

$$V - E + F = 2$$

$$\sum_{n=1}^{\infty} \frac{1}{n^s} = \prod_{p \in \mathbb{P}} \frac{1}{1 - \frac{1}{p^s}}$$

$$\sum_{n=1}^{\infty} n^{-n} = \int_0^1 x^{-x} dx$$

$$n! = \int_0^{\infty} x^n e^{-x} dx$$

$$\pi(x) \sim \frac{x}{\log x}$$