

1173-11-64

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*Computer-assisted Proof of a Ramanujan Pi Formula.* Preliminary report.

Ramanujan discovered the following beautiful  $\pi$  formula:

$$\sum_{k=0}^{\infty} (-1)^k (4k+1) \frac{(1/2)_k^3}{(1)_k^3} = \frac{2}{\pi},$$

where  $(z)_k$  is the Pochhammer symbol. A computer-assisted generalization is obtained, namely

$$\sum_{k=0}^{\infty} (-1)^k (4k+1) \frac{(1/2)_k}{(1)_k} \frac{(-n)_k}{(3/2+n)_k} \frac{(1+n)_k}{(1/2-n)_k} = \frac{2n+1}{\cos(\pi n)}$$

which holds for all complex  $n$  except  $n = j + 1/2$  for integers  $j$ . This is joint work with Grinnell College students Tiger Luo and Anna Vasenina. (Received September 14, 2021)