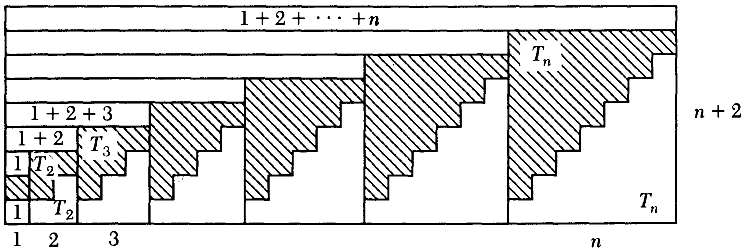
Proof without Words: Sums of Triangular Numbers

$$T_n = 1 + 2 + \cdots + n \Rightarrow T_1 + T_2 + \cdots + T_n = \frac{n(n+1)(n+2)}{6}$$



$$3(T_1 + T_2 + \cdots + T_n) = (n+2) \cdot T_n$$

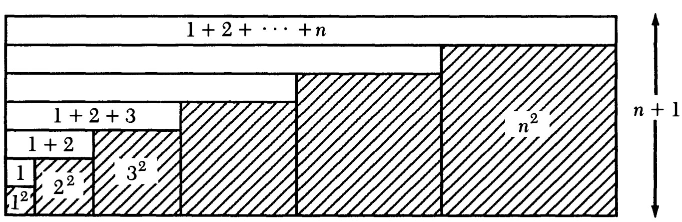
$$T_1 + T_2 + \cdots + T_n = \frac{(n+2)}{3} \cdot \frac{n(n+1)}{2} = \frac{n(n+1)(n+2)}{6}$$

—MONTE J. ZERGER
Adams State College
Alamosa, CO 81102

Proof without Words
Corollary: Sums of Squares

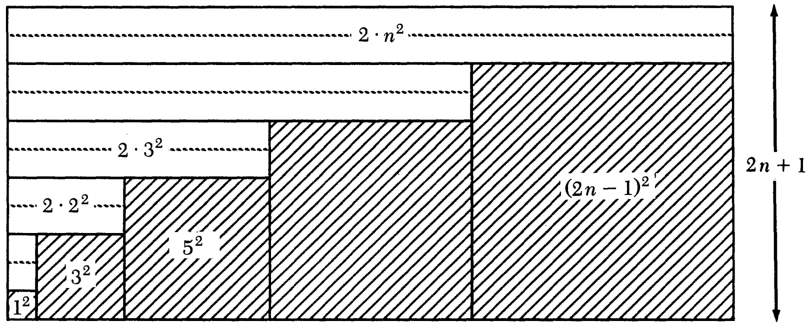
$$1^2 + 2^2 + \cdots + n^2 = \frac{n(n+1)(2n+1)}{6}$$

$$1^2 + 3^2 + \cdots + (2n-1)^2 = \frac{n(2n-1)(2n+1)}{3}$$



$$1^2 + 2^2 + \cdots + n^2 + (T_1 + T_2 + \cdots + T_n) = T_n \cdot (n+1)$$

$$1^2 + 2^2 + \cdots + n^2 = \frac{n(n+1)^2}{2} - \frac{n(n+1)(n+2)}{6} = \frac{n(n+1)(2n+1)}{6}$$



$$1^2+3^2+\cdots+(2n-1)^2+2(1^2+2^2+\cdots+n^2)=n^2\cdot(2n+1)$$

$$1^2+3^2+\cdots+(2n-1)^2=n^2(2n+1)-\frac{n(n+1)(2n+1)}{3}=\frac{n(2n-1)(2n+1)}{3}$$

—Roger B. Nelsen
Lewis and Clark College
Portland, OR 97219

Cyclic Groups and the Generation of La Loubère Magic Squares

DONALD H. ECKHARDT
Air Force Geophysics Laboratory
Bedford, MA 01731

The magical squares, however wonderful soever they may seem, are what I cannot value myself upon, but am rather ashamed to have it known I have spent any part of my time in employment that cannot possibly be of any use to myself or others.

Benjamin Franklin [1]

In 1687 Isaac Newton published his first edition of *Philosophiae Naturalis Principia Mathematica*. The *Principia* is as much a work of natural philosophy as of mathematics, so mathematicians have to share the tercentenary jubilation with physicists, astronomers, and other natural scientists. For mathematicians I offer an anniversary you can celebrate by yourselves: In 1687, King Louis XIV dispatched Simon de La Loubère as his extraordinary ambassador to the King of Siam. On his return, La Loubère, one of the great dilettantes of his time, wrote a scholarly account of his voyage via India and his short stay in Siam. He communicated, among other things, the official rules that the Siamese used to track the sun and the moon, and a technique that the Indians used to construct magic squares. The astronomical rules were initially of such import that Jean Dominique Cassini, the director of the Paris Observatory, cited them in one of his own publications. Nevertheless, they were only of temporary value for the revolution that Newton ignited eventually made Siamese