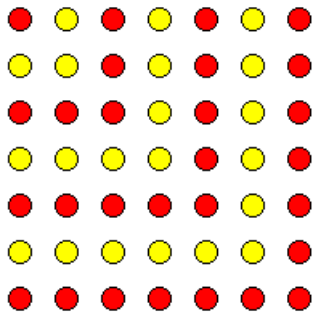


Proofs Without Words

Tanya Khovanova

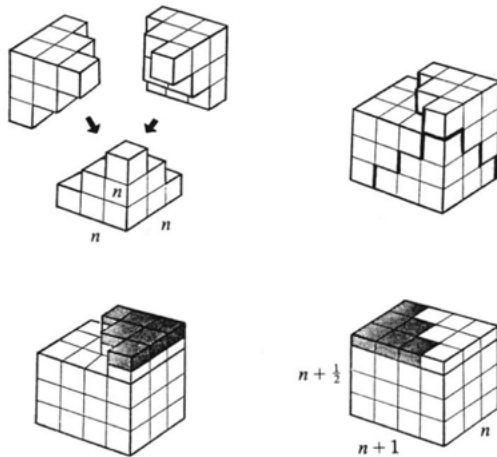
March 31, 2014

Sum of Odd Numbers

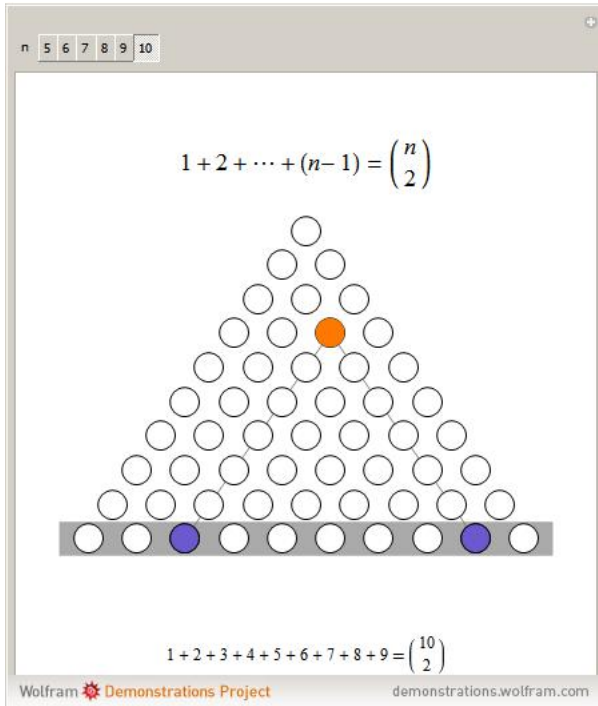


$$1 + 3 + 5 + \dots + (2n - 1) = n^2$$

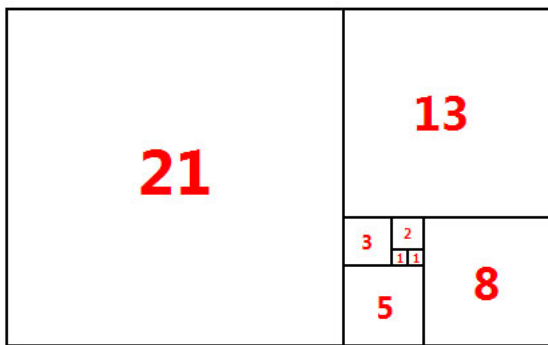
Sum of Squares



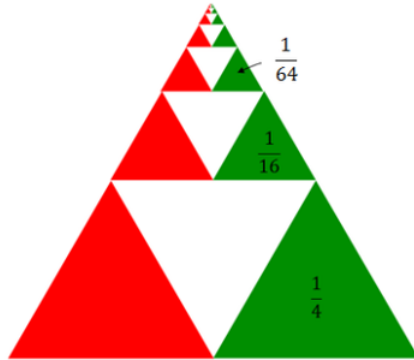
n choose 2



Fibonacci Numbers



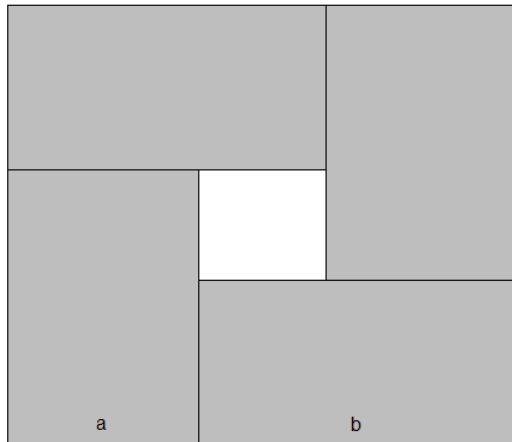
$$\frac{1}{4} + \left(\frac{1}{4}\right)^2 + \left(\frac{1}{4}\right)^3 + \dots = \frac{1}{3}$$



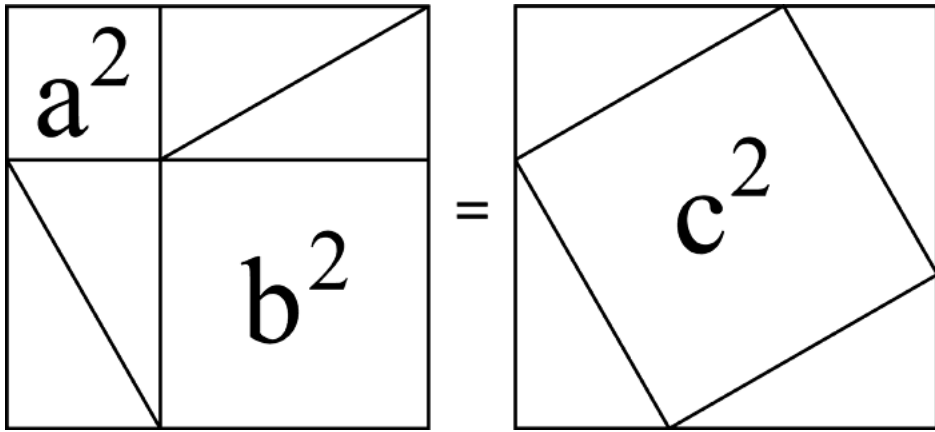
$$\frac{1}{3} = \text{Green area} = \frac{1}{4} + \left(\frac{1}{4}\right)^2 + \left(\frac{1}{4}\right)^3 + \dots$$

Inequalities

$$\frac{a+b}{2} \geq \sqrt{ab}$$



Pythagorean Theorem



Domino Tilings

