

Girls' *Angle* Bulletin

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To Foster and Nurture Girls' Interest in Mathematics

Inside:

Sum of cubes: **Proof** / 01/29/09
Question $1^3 + 2^3 + 3^3 + 4^3 + \dots + n^3 = ?$
Ingrid Daubechies, Part 4

$1^3 + 2^3 + 3^3 = 1+8+27=36$
 $1^2 + 2^2 + 3^2 = 1+4+9=14$
 $1 + 2 + 3 = 1+2+3=6$
Prueba del 9: Modular Arithmetic

$36 + 64 = 100$
 $(1+2+3+4)^2 = 10^2 = 100$
**Right Triangles and Circles:
Sine and Cosine**

Let's test:
 $1^3 + 2^3 + \dots + 10^3 = 1+8+27+64+125+216+\dots$
 $34^2 + 512 + 729 + 1000 = 3025 = 55^2$
 $55 = 1+2+3+\dots+10$
**Sums of Odd Numbers
and Sums of Cubes**

and More!

Anna's Math Journal

Area of a Regular Octagon

Math in Your World

Cycloids, Area and Perimeter

Notes from the Club

FORMULA:

$$1^3 + 2^3 + \dots + n^3 = (1+2+3+4+\dots+n)^2$$