27 = 26 + 1
27 = 3 \cdot 9 = 3 \cdot 3 \cdot 3 = 3^3

Cube: \quad 27 = 3^3

Two ways to write 27 as the sum of 3 squares.

\[
\begin{align*}
27 & = 3^2 + 3^2 + 3^2 \\
27 & = 5^2 + 1^2 + 1^2
\end{align*}
\]

smallest such number.

\[
27^5 + 84^5 + 110^5 + 133^5 = 144^5,
\]
breaks Euler's conjecture.

27! + 1 is prime; the only cube one less than an even
The only cube that exceeds a square by 2. [Left open]

All integers are the sum of at most 7 primes.

Goldbach: all even numbers are the sum of two primes. Unknown!

Number of partitions of 15 into distinct parts.

Long chain in the Collatz problem:

17 \rightarrow 52 \rightarrow 26 \rightarrow 13 \rightarrow 40 \rightarrow 20 \rightarrow 10 \rightarrow 5 \rightarrow 16 \rightarrow 8 \rightarrow 4 \rightarrow 2 \rightarrow 1

(Halve even numbers; otherwise triple and add one.)

From 27 it takes 111 steps!

27 ways to dissect a nonagon into triangles
with 6 chords.

Decagonal number.
The unique exceptional Jordan algebra is 27 dimensional.