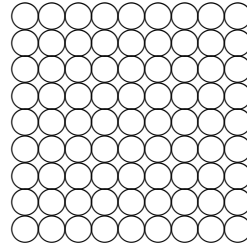


81 Eighty-One LXXXI



Corresponding ordinal: eighty-first.

The number 81 is the forty-first odd number and the fifty-eighth composite number.

As a product of primes: $81 = 3^4$.

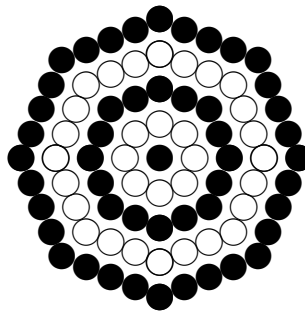
The number 81 has five divisors: 1, 3, 9, 27, 81.

The number 81 is the sixty-second deficient number: $s(81) = 1 + 3 + 9 + 27 = 40 < 81$.
It must be deficient because it is a power of a prime.

The number 81 is the tenth square number: $81 = 9^2$.

As the sum of two triangular numbers, $81 = 36 + 45$.

The number $81 = 1 + 8 + 16 + 24 + 36$ is a centered octagonal number.



As a sum of four or fewer squares: $81 = 9^2 = 1^2 + 4^2 + 8^2 = 4^2 + 4^2 + 7^2 = 3^2 + 6^2 + 6^2 = 2^2 + 2^2 + 3^2 + 8^2 = 2^2 + 4^2 + 5^2 + 6^2$.

As a sum of nine or fewer cubes: $81 = 3 \cdot 1^3 + 3 \cdot 2^3 + 2 \cdot 3^3 = 1^3 + 2 \cdot 2^3 + 4^3 = 3 \cdot 3^3$.

As a difference of two squares: $81 = 41^2 - 40^2$.

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The number 81 appears in four Pythagorean triples: [81, 108, 135], [81, 360, 369], [81, 1092, 1095], [81, 3280, 3281]. The last is primitive.

As a sum of three odd primes: $81 = 3 + 5 + 73 = 3 + 7 + 71 = 3 + 11 + 67 = 3 + 17 + 61 = 3 + 19 + 59 = 3 + 31 + 47 = 3 + 37 + 41 = 5 + 5 + 71 = 5 + 17 + 59 = 5 + 23 + 53 = 5 + 29 + 47 = 7 + 7 + 67 = 7 + 13 + 61 = 7 + 31 + 43 = 7 + 37 + 37 = 11 + 11 + 49 = 11 + 17 + 53 = 11 + 23 + 47 = 11 + 29 + 41 = 13 + 31 + 37 = 17 + 17 + 47 = 17 + 23 + 41 = 19 + 19 + 43 = 19 + 31 + 31 = 23 + 29 + 29$.

In the decimal expansion of $1/81 = 0.012345679012345679\dots$, each digit appears (in order) except 8.

The number $81 \cdot 2^{81} - 1$ is prime. The number 81 is the smallest square with this property, and the only one up to 400.

The number 81 is the smallest square such that the sum of its divisors, $1 + 3 + 9 + 27 + 81 = 121$, is also a square. The next such square is 400: the sum of the divisors of 400 is $(1 + 2 + 4 + 8 + 16)(1 + 5 + 25) = 961 = 19^2$. (Penguin Dictionary)

The number 81 is the only number greater than 1 that is the square of the sum of its digits.

The numeral "81" is used as metonym for Hell's Angels because H is the eighth letter of the alphabet, and A is the first.

There are 81 rectangles on a shogi board (Japanese chess).