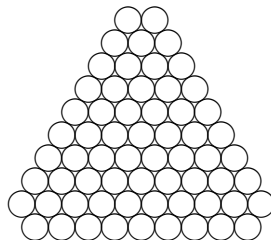# 63 Sixty-Three LXIII

Corresponding ordinal: sixty-third.

The number 63 is the thirty-second odd number and the forty-fourth composite number.

As a product of primes: $63 = 3^2 \cdot 7$.

The number 63 has six divisors: 1, 3, 7, 9, 21, 63.

The number 63 is the forty-ninth deficient number: $s(63) = 21{+}9{+}7{+}3{+}1 = 41 < 63$.

As a sum of four or fewer squares: $63 = 1^2 + 2^2 + 3^2 + 7^2 = 1^2 + 1^2 + 5^2 + 6^2 = 3^2 + 3^2 + 3^2 + 6^2 = 2^2 + 3^2 + 5^2 + 5^2$.

As a sum of nine or fewer cubes: $63 = 4 \cdot 1^3 + 4 \cdot 2^3 + 3^3 = 1^3 + 2^3 + 2 \cdot 3^3$.

As a difference of two squares: $63 = 8^2 - 1^2 = 12^2 - 9^2 = 32^2 - 31^2$.

As a sum of three odd primes: $63 = 3 + 7 + 53 = 3 + 13 + 47 = 3 + 17 + 43 = 3 + 19 + 41 = 3 + 23 + 37 = 3 + 29 + 31 = 5 + 5 + 53 = 5 + 11 + 47 = 5 + 17 + 41 = 5 + 29 + 29 = 7 + 13 + 43 = 7 + 19 + 37 = 11 + 11 + 41 = 11 + 23 + 29 = 13 + 13 + 37 = 13 + 19 + 31 = 17 + 17 + 29 = 17 + 23 + 23$.

The number 63 appears in seven Pythagorean triples:

$$[16, 63, 65] \quad [60, 63, 87] \quad [63, 84, 105] \quad [63, 216, 225]$$
$$[63, 280, 287] \quad [63, 660, 663] \quad [63, 1984, 1985]$$

The first and last are primitive.

The number 63 is the smallest number n whose Roman numeral has alphabetic value n. Indeed, the value of LXIII is $12 + 24 + 9 + 9 + 9 = 63$. The only other number with that property is 69.

A barrel that holds 63 gallons is called a *hogshead*.

President Franklin Delano Roosevelt died on April 12, 1945, at age 63.

Michael Jordan scored a record of 63 points in a playoff game on April 20, 1986, in Boston Garden.