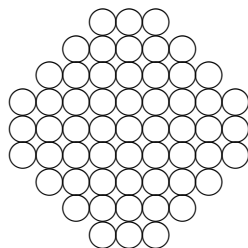


57 Fifty-Seven LVII



Corresponding ordinal: fifty-seventh.

The number 57 is the twenty-ninth odd number and the fortieth composite number.

As a product of primes: $57 = 3 \cdot 19$.

The number 57 has four divisors: 1, 3, 19, 57.

The number 57 is the forty-fourth deficient number: $s(57) = 1 + 3 + 19 = 23 < 57$.

As a sum of four or fewer squares: $57 = 2^2 + 2^2 + 7^2 = 4^2 + 4^2 + 5^2 = 1^2 + 2^2 + 4^2 + 6^2 = 3^2 + 4^2 + 4^2 + 4^2$.

As a sum of nine or fewer cubes: $57 = 3 \cdot 1^3 + 2 \cdot 3^3 = 1^3 + 7 \cdot 2^3$.

As the difference of two squares: $57 = 11^2 - 8^2 = 29^2 - 28^2$.

The number 57 appears in four Pythagorean triples:

$$[57, 76, 95], \quad [57, 176, 185], \quad [57, 540, 543], \quad [57, 1624, 1625].$$

The second and fourth are primitive.

As a sum of three odd primes: $57 = 3 + 7 + 47 = 3 + 11 + 43 = 3 + 13 + 41 = 3 + 17 + 37 = 3 + 23 + 31 = 5 + 5 + 47 = 5 + 11 + 41 = 5 + 23 + 29 = 7 + 7 + 43 = 7 + 13 + 37 = 7 + 19 + 31 = 11 + 17 + 29 = 11 + 23 + 23 = 13 + 13 + 31 = 17 + 17 + 23 = 19 + 19 + 19$.

A radian is a little more than 57 degrees.

The number 57 is sometimes called a “Grothendieck prime”, after the prodigious mathematician Alexandre Grothendieck who is alleged to have said 57 when asked to give an example of a specific prime. Because it doesn’t end in an even digit, or in 5, its digits have no common factor, and it is not the product of two one-digit numbers, it is often thought to be prime at first glance. Another such number is 51.

2 Chapter 57 Fifty-Seven LVII

The number 57 is a centered square number with the corners chopped off, as you can see in the figure above.

At age 57, George Washington was inaugurated as President of the United States.

At age 57, Thomas Jefferson was inaugurated as President of the United States.

At age 57, James Madison was inaugurated as President of the United States.

At age 57, John Quincy Adams was inaugurated as President of the United States.

“Heinz 57 varieties” is an old slogan of a famous ketchup manufacturer.