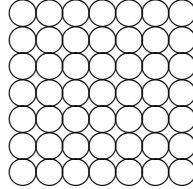


49 Forty-Nine XLIX



Corresponding ordinal: forty-ninth.

The number 49 is the twenty-fifth odd number and the thirty-third composite number.

As a product of primes: $49 = 7^2$.

The number 49 has three divisors: 1, 7, 49.

The number 49 is the thirty-eighth deficient number: $s(49) = 1 + 7 = 8 < 49$. As 49 is a power of a prime, it must be deficient.

The number 49 is the eighth square number: $49 = 7^2$.

As a sum of two triangular numbers, $49 = 21 + 28$.

As a sum of four or fewer squares: $49 = 7^2 = 2^2 + 3^2 + 6^2 = 1^2 + 4^2 + 4^2 + 4^2 = 2^2 + 2^2 + 4^2 + 5^2$.

As a sum of nine or fewer cubes: $49 = 6 \cdot 1^3 + 2 \cdot 2^3 + 3^3 = 1^3 + 6 \cdot 2^3$.

As a difference of two squares: $49 = 25^2 - 24^2$.

The number 49 appears in two Pythagorean triples: $[49, 168, 175]$ and $[49, 1200, 1201]$. The second is primitive.

As a sum of three odd primes: $49 = 3 + 3 + 43 = 3 + 5 + 41 = 3 + 17 + 29 = 3 + 23 + 23 = 5 + 7 + 37 = 5 + 13 + 31 = 7 + 11 + 31 = 7 + 13 + 29 = 7 + 19 + 23 = 11 + 19 + 19 = 13 + 13 + 23 = 13 + 17 + 19$.

The number 49 is the smallest square that is the sum of three consecutive primes.

The number 49 and each of its digits is a square number. It is the only two-digit number with this property.

The number 49 is the smallest number that is the sum of the proper divisors of six different numbers: $s^{-1}(49) = \{75, 215, 287, 407, 527, 551\}$.

2 Chapter 49 Forty-Nine XLIX

From January 3, 1959 through August 20, 1959, there were 49 stars in the U. S. and the stars on the flag were arranged like this:



At age 49, James Knox Polk was inaugurated as President of the United States.

At age 49, James Abram Garfield was inaugurated as President of the United States.

The forty-ninth state to enter the Union was Alaska.

The forty-ninth largest state in the United States is Delaware.

The *forty-niners* were people taking part in the California gold rush in 1849. Or are they a football team?