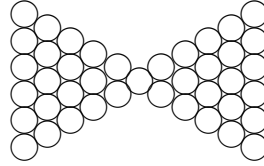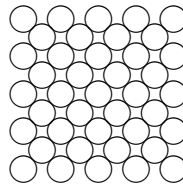# 41 Forty-One XLI

Corresponding ordinal: forty-first.

The number 41 is the twenty-first odd number, the thirteenth prime number, and the thirty-second deficient number.

The prime 41 appears in the sixth twin-prime pair $41, 43$.

As a sum of four or fewer squares: $41 = 4^2 + 5^2 = 1^2 + 2^2 + 6^2$. So 41 is the sum of two consecutive squares. That makes it a centered square number:

Do you see the consecutive squares?

As the sum of nine or fewer cubes: $41 = 6 \cdot 1^3 + 2^3 + 3^3 = 1^3 + 5 \cdot 2^3$.

As a difference of two squares: $41 = 21^2 - 20^2$.

The number 41 appears in two Pythagorean triples: $[9, 40, 41]$ and $[41, 840, 841]$. Both are primitive, of course.

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

The number $41 = 3 + 7 + 31$ is the sum of the first three Mersenne primes (primes of the form $2^n - 1$).

The number 41 is the smallest prime whose cube is equal to the sum of three nonzero cubes in two different ways: $41^3 = 2^3 + 17^3 + 40^3 = 6^3 + 32^3 + 33^3$. The next such prime is 229 whose cube is equal to $76^3 + 165^3 + 192^3$ and to $102^3 + 157^3 + 192^3$.

Let T_n be the n-th triangle number. Then $41 + 2T_n$ is prime for $1 \leq n \leq 40$.

The number $11^{41} = 4\,978\,518\,112\,499\,354\,698\,647\,829\,163\,838\,661\,251\,242\,411$ does not contain the digit 0.

The expression $x^2 - x + 41$ gives primes for $x = 1, 2, \ldots, 40$.

The forty-first President of the United States was George Herbert Walker Bush.

The forty-first state to enter the Union was Montana.

The forty-first largest state in the United States is West Virginia.

Lizzie Borden took an axe, gave her mother 40 whacks. When she saw what she had done, gave her father 41.

The numerical value of "J S Bach" is 41.