SORU 1

2520 is the smallest number that can be divided by each of the numbers from 1 to 10 without any remainder.

What is the smallest positive number that is evenly divisible by all of the numbers from 1 to 20?

SORU 2

The sum of the squares of the first ten natural numbers is,

$1^2+2^2+...+10^2=385$

The square of the sum of the first ten natural numbers is,

$(1+2+...+10)^2=55^2=3025$

Hence the difference between the sum of the squares of the first ten natural numbers and the square of the sum is $3025-385=2640$.

Find the difference between the sum of the squares of the first one hundred natural numbers and the square of the sum.

SORU 3

By listing the first six prime numbers: 2, 3, 5, 7, 11, and 13, we can see that the 6th prime is 13.

What is the 10 001st prime number?

SORU 4

A Pythagorean triplet is a set of three natural numbers, a < b < c, for which,

$a^2 + b^2 = c^2$

For example, $3^2 + 4^2 = 9 + 16 = 25 = 5^2$.

There exists exactly one Pythagorean triplet for which a + b + c = 1000. Find the product abc.

SORU 5

The four adjacent digits in the 1000-digit number that have the greatest product are 9 × 9 × 8 × 9 = 5832.

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73167176531330624919225119674426574742355349194934
96983520312774506326239578318016984801869478851843
85861560789112949495459501737958331952853208805511
12540698747158523863050715693290963295227443043557
66896648950445244523161731856403098711121722383113
62229893423380308135336276614282806444486645238749
30358907296290491560440772390713810515859307960866
70172427121883998797908792274921901699720888093776
65727333001053367881220235421809751254540594752243
52584907711670556013604839586446706324415722155397
53697817977846174064955149290862569321978468622482
83972241375657056057490261407972968652414535100474
82166370484403199890008895243450658541227588666881
16427171479924442928230863465674813919123162824586
17866458359124566529476545682848912883142607690042
24219022671055626321111109370544217506941658960408
07198403850962455444362981230987879927244284909188
84580156166097919133875499200524063689912560717606
05886116467109405077541002256983155200055935729725
71636269561882670428252483600823257530420752963450
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Find the thirteen adjacent digits in the 1000-digit number that have the greatest product. What is the value of this product?