

Question 1 Write a program that reads an integer (N), checks if the read number is a prime number, and prints out the outcome as below.

NOTE: A prime number is a number whose only divisors are 1 and itself.

Input	5	8	23
Output	Prime number	Not a prime number	Prime number

Question 2 Write a program that reads an integer (N), and prints ALL the perfect numbers smaller than N as integers.

NOTE: A perfect number is defined as follows: Any positive number whose sum of its positive divisors except itself is equal to itself.

(e.g., 6 and 28 are perfect numbers ($6 = 1 + 2 + 3$), ($28 = 1 + 2 + 4 + 7 + 14$):

Input	7	500	1000
Output	6	6 28 496	6 28 496

Question 3 Write a program that reads an integer value (N), and computes the sum of the second powers of each digit as an integer.

(e.g., $N = 572$, the output will be $:2^5 + 2^7 + 2^2 = 32 + 128 + 4 = 164$)

NOTE: To calculate the power of a number you can use `std::pow()` method as below:

To calculate a^b `std::pow(a, b)`

Input	572	1452	9502
Output	164	54	549