DWITE Online Computer Programming Contest
December 2005

Problem 1

Semiprimes

A semiprime is a composite number that is the product of two (possibly equal) primes. The first few are 4, 6, 9, 10, 14, 15, 21, 22, ...

So between the values 1 and 10 there are 4 semiprimes. Your task in this problem is to determine the number of semiprimes between a range of two values, inclusive.

The input file (**DATA11.txt** for the first submission and **DATA12.txt** for the second submission) will contain five sets of data. Each set will contain two lines. The first line contains ***L***, the lower value of the range and the second line contains ***U***, the upper value of the range.
1 < L <= U < 1000000 and ***U - L <= 5000***.

The output file (**OUT11.txt** for the first submission and **OUT12.txt** for the second submission) will contain the number of semiprimes between L and U, inclusive.

Sample Input (Only three sets given)	**Sample Output**
4 10 11 16 22 22	4 2 1

http://mathworld.wolfram.com/Semiprime.html