

Prime Numbers II

A. Think of a number bigger than 1 and smaller than 23 (23 is a prime number). Call it n . Can you find another number m , also bigger than 1 and smaller than 23, such that $nm - 1$ is a multiple of 23? Can you do this for another choice of n ? Replace 23 by 41 and try again. What if you replace 23 by 39 and take $n = 13$?

B. Let's say that p is a Left prime if $p + 1$ is a multiple of 4, and a Right prime if it isn't. Do you think there are likely to be infinitely many Left primes and infinitely many Right primes, or will we run out of one kind if we go high enough?

C. Choose an odd number between 50 and 100. Can you find three prime numbers which give you the number you have chosen when you add them together? Try it with some more odd numbers, including some bigger ones.