Scratch Unit: Programming Computer Games

Lesson 4 - Support

How could we use an algorithm to check prime numbers? Discuss.

What would the logical steps be? 5 6 9 17 25 42

E.g. -Divide number by 2.

-If whole number then say, "Not prime."

-If decimal then divide number by 3.

-If whole number then say, "Not prime."

-etc.

A computer would use the modulo (mod) of a number (the remainder of a number when divided.) 14/3 = 4 r2

So the mod of 14 is 2 (the remainder)

This is an easy way to check if numbers can be divisible by other numbers. The computer can rule out all other numbers apart from 1 and the number itself - i.e. a prime number.

How could we use an algorithm to check prime numbers up to 100?

We can use the 'Sieve of Erathosthenes'! https://en.wikipedia.org/wiki/Sieve_of_Eratosthenes