Teste.

Algorithm 1 Usando bitset.

```
#include <iostream>
using std::cin;
using std::cout;
using std::endl;

#include <iomanip>
using std::setw;

#include <bitset>

#include <cmath>

int main()
{
   const int size = 1024;
   int i, value, counter;
   std::bitset< size > sieve;

   sieve.flip();

   // perform Sieve of Eratosthenes
   int finalBit = sqrt( sieve.size() ) + 1;

   for ( i = 2; i < finalBit; ++i )
      if ( sieve.test( i ) )
         for ( int j = 2 * i; j < size; j += i )
            sieve.reset( j );

   cout << "The prime numbers in the range 2 to 1023 are:\n";

   for ( i = 2, counter = 0; i < size; ++i )
      if ( sieve.test( i ) ) {
         cout << setw( 5 ) << i;

         if ( ++counter % 12 == 0 )
            cout << '\n';
      }

   cout << endl;

   // get a value from the user to determine if it is prime
   cout << "\nEnter a value from 1 to 1023 (-1 to end): ";
   cin >> value;

   while ( value != -1 ) {
      if ( sieve[ value ] )
         cout << value << " is a prime number\n";
      else
         cout << value << " is not a prime number\n";

      cout << "\nEnter a value from 2 to 1023 (-1 to end): ";
      cin >> value;
   }

   return 0;
```