

Sieve of Eratosthenes

Algorithm

1. Create a list l of integers from 2 through M .
2. Select $p = 2$, the smallest prime number.
3. Compute multiples of prime p up until M .
4. Mark those multiples in the original list l .
5. Repeat steps 3 & 4 until $p > \sqrt{M}$.
6. Now, all unmarked integers in l are primes.