

See Page 116 in the text book (Parallel Programming in C with MPI and OpenMP, by Michael J. Quinn)

1. Create a list of natural numbers 2,3,4,...N (none which is marked)
2. Set  $k=2$ , the first unmarked number on the list.
3. Repeat until  $k^2 > N$ 
  - a. Mark all multiples of  $k$  between  $k^2$  and  $N$
  - b. Find the smallest number greater than  $k$  that is unmarked. Set  $k$  to this new value.
4. Print the unmarked numbers (the primes).

Sample output from sieve.pl (N=60)

```
time> 0 wallclock secs ( 0.00 usr + 0.00 sys = 0.00 CPU)
2
3
5
7
11
13
17
19
23
29
31
37
41
43
47
53
59
```