fun sieve_of_eratosthenes (arr, n)

* arr is array of size n+1.
* arr[0] = arr[1] = false.
* for i=2 ⟶ i<=sqrt(n), i++
  - if (element at loc^n i is prime) {
    for j = i^2 ⟶ j<=n, j+=i
    arr[j] = false.

start from i^2 and not i*2, before i^2 everything is handled already

go till sqrt(n) bcoz that is where we will get the factors, after sqrt(n) we will be only doing redundant check.

$\sqrt{18} = 4.24$

1 → 18
2 → 9
3 → 6

→ all factors above $\sqrt{n}$

all factors below $\sqrt{n}$

4 → does not divide.

5 → does not divide
6 → 3
7 → does not divide
8 → does not divide
& so on.

finding multiples of these is sufficient

these are all redundant.