

## Factors of a number:-

A number that divides another number is called factors of a number.

$$n = 20 \Rightarrow 1, 2, 4, 5, 10, 20$$

Method-1: Run a loop from 1 to 20

Complexity  $O(n)$

$$1 * 20 = 20$$

$$2 * 10 = 20$$

$$4 * 5 = 20$$

$$5 * 4 = 20$$

$$10 * 2 = 20$$

$$20 * 1 = 20$$

⇒ Repeated case

To eliminate such stuff,

Method - 2 :- Run loop  $(1 - \sqrt{n})$