## Primary Test of O (sqrt (N))

\*All divisory of a Number N occur in pairs of (a,b).81 a\*b=N fx: 12 divisory are 1,2,3,4,6,12 pars are (1,12), (2,6), (3,4)

\*For a divisor pairs (ab), one of them lies below sqrt(N) and other lies above sqrt(N)

(i) Both a and b are not below squt(!)"
-false because it contradicts

a\*b=N. But the statement states a\*b(i).

(ii) Both a and b are above squt (N) Salze decause it shows and b > N
which contradicts and b = N

(iii) are is below sent (11) and above sent (N) because it b< sent (N)

then 1 ( sqrt (N)/6, where a = sqrt (N)\* (1+2). Hence at sgrt (N), II bisgrd (M) then 1/ squt (Mb. Hence alsqut (M) factollist we sind of a pair, then we don't have to sind anothe. (ii) One of them lies above on below sgrt (N). So, Time complexity is O(squt(N)) and main code i)

for (int i=2), it = n; itt)

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