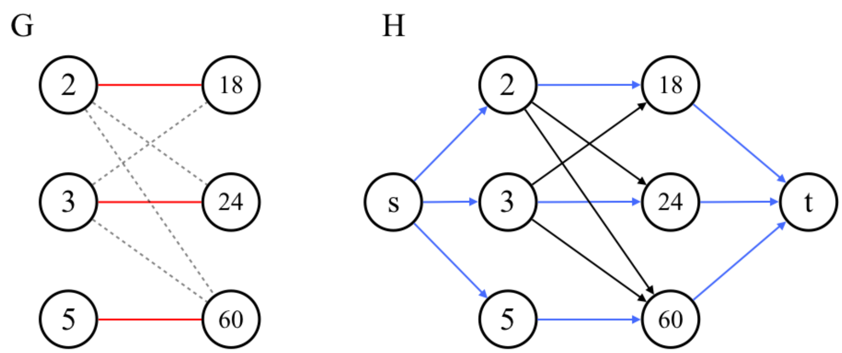
Let $S = \{s_1, s_2, \ldots, s_k\}$ be a set of k integers ≥ 2. We say the integers in S are **semi-relative primes** if there exist k **distinct** prime numbers $p_1, p_2, \ldots, p_k$ so that p_i divides s_i for each $i \in [1, k]$. Given a set T of n integers, find the subset R of T so that the integers in R are semi-relative primes and $|R|$ is maximized.

Hint. Construct an **undirected** bipartite graph $G = (U \cup V, E)$, where U contains all possible prime divisors and V contains all integers in T, if a prime $u \in U$ divides an integer $v \in V$, then connect u and v with an edge (u, v). Observe that: G has a bipartite matching of ℓ edges iff S has an ℓ-size subset R so that the integers in R are semi-relative primes.

To find the maximum bipartite matching, we can appeal to the algorithm of the maximum flow problem. Construct a **directed** graph $H = (\{s, t\} \cup U \cup V, E')$. Initially, $E' = \emptyset$. For each node $u \in U$, add a directed edge (s, u) to E' with capacity $c(s, u) = 1$. For each node $v \in V$, add a directed edge (v, t) to E' with capacity $c(v, t) = 1$. For each undirected edge (u, v) in G where $u \in U$ and $v \in V$, add a directed edge (u, v) to E' with capacity $c(u, v) = 1$. Observe that: H has an ℓ units of flow from s to t iff G has a bipartite matching of size ℓ.



G has a matching M of size ℓ iff H has an s-t flow of ℓ units.

Input

The first line contains n, an integer in $[1, 100]$. The second line contains the n integers $t_1, t_2, \ldots, t_n$ in T, where each t_i is an integer in $[2, 200]$.

Output

Output the maximized $|R|$.

Sample Input

```
5
2 3 6 5 10
```

Sample Output

```
3
```