5128. Graph Connectivity With Threshold

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User Accepted:	0
User Tried:	0
Total Accepted:	0
Total Submissions:	0
Difficulty:	Hard

We have `n` cities labeled from `1` to `n`. Two different cities with labels `x` and `y` are directly connected by a bidirectional road if and only if `x` and `y` share a common divisor **strictly greater** than some `threshold`. More formally, cities with labels `x` and `y` have a road between them if there exists an integer `z` such that all of the following are true:

- `x % z == 0`,
- `y % z == 0`, and
- `z > threshold`.

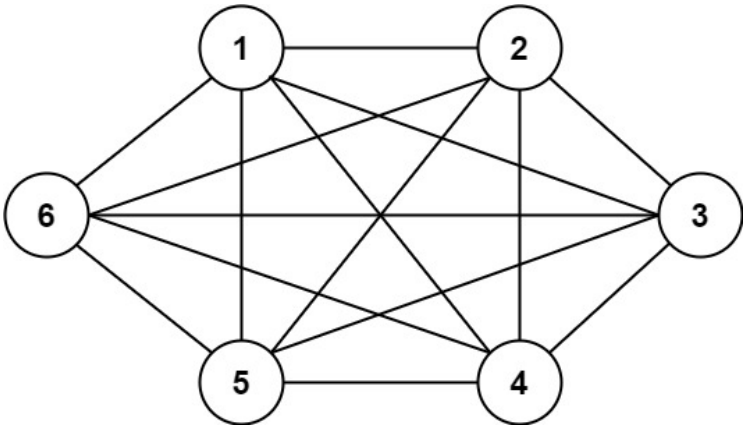
Given the two integers, `n` and `threshold`, and an array of `queries`, you must determine for each `queries[i] = [a_i, b_i]` if cities `a_i` and `b_i` are connected (i.e. there is some path between them).

Return *an array* `answer`, *where* `answer.length == queries.length` *and* `answer[i]` *is* `true` *if for the* `i^th` *query, there is a path between* `a_i` *and* `b_i`, *or* `answer[i]` *is* `false` *if there is no path.*

Example 1:

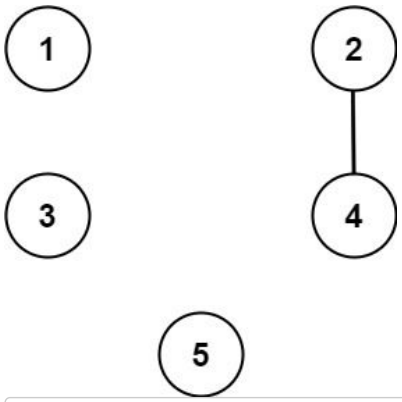

```
Input: n = 6, threshold = 2, queries = [[1,4],[2,5],[3,6]]
Output: [false,false,true]
Explanation: The divisors for each number:
1:   1
2:   1, 2
3:   1, 3

4:   1, 2, 4
5:   1, 5
6:   1, 2, 3, 6
Using the underlined divisors above the threshold, only cities 3 and 6 share a common divisor, so they are the
only ones directly connected. The result of each query:
[1,4]   1 is not connected to 4
[2,5]   2 is not connected to 5
[3,6]   3 is connected to 6 through path 3--6
```

Example 2:



```
Input: n = 6, threshold = 0, queries = [[4,5],[3,4],[3,2],[2,6],[1,3]]
Output: [true,true,true,true,true]
Explanation: The divisors for each number are the same as the previous example. However, since the threshold is 0,
all divisors can be used. Since all numbers share 1 as a divisor, all cities are connected.
```

Example 3:




```
Input: n = 5, threshold = 1, queries = [[4,5],[4,5],[3,2],[2,3],[3,4]]
Output: [false,false,false,false,false]
Explanation: Only cities 2 and 4 share a common divisor 2 which is strictly greater than the threshold 1, so they are the
Please notice that there can be multiple queries for the same pair of nodes [x, y], and that the query [x, y] is equivalen
```

Constraints:

- $2 <= n <= 10^4$
- $0 <= threshold <= n$
- $1 <= queries.length <= 10^5$
- $queries[i].length == 2$
- $1 <= a_i, b_i <= cities$
- $a_i != b_i$

JavaScript

```
/**
 * @param {number} n
 * @param {number} threshold
 * @param {number[][]} queries
 * @return {boolean[]}
 */
var areConnected = function(n, threshold, queries) {

};
```

Custom Testcase Use Example Testcases