Description | Accepted | Editorial | Submissions | Solutions

# 2979. Most Expensive Item That Can Not Be Bought

Premium

Solved

Medium | Topics | Companies | Hint

You are given two **distinct prime** numbers `primeOne` and `primeTwo`.

Alice and Bob are visiting a market. The market has an **infinite** number of items, for **any** positive integer `x` there exists an item whose price is `x`. Alice wants to buy some items from the market to gift to Bob. She has an **infinite** number of coins in the denomination `primeOne` and `primeTwo`. She wants to know the **most expensive** item she can **not** buy to gift to Bob.

Return *the price of the **most expensive** item which Alice can not gift to Bob.*

**Example 1:**

```
Input: primeOne = 2, primeTwo = 5
Output: 3
Explanation: The prices of items which cannot be bought are [1,3]. It can be shown that all items with a price greater than 3 can be bought using a combination of coins of denominations 2 and 5.
```

**Example 2:**

```
Input: primeOne = 5, primeTwo = 7
Output: 23
Explanation: The prices of items which cannot be bought are [1,2,3,4,6,8,9,11,13,16,18,23]. It can be shown that all items with a price greater than 23 can be bought.
```

**Constraints:**

- `1 < primeOne, primeTwo < 10^4`
- `primeOne, primeTwo` are prime numbers.
- `primeOne * primeTwo < 10^5`

Seen this question in a real interview before? 1/5

Yes | No

Accepted 1.3K | Submissions 1.6K | Acceptance Rate 78.1%

Topics

Companies

Hint 1

Hint 2

Hint 3

Hint 4

Similar Questions

Discussion (3)



13 | 3

Code

Python3 | Auto

```python
class Solution:
    def mostExpensiveItem(self, primeOne: int, primeTwo: int) -> int:
        return primeOne*primeTwo - primeOne - primeTwo

```

Saved

Ln 4, Col 9

Testcase | Test Result

Accepted Runtime: 38 ms

Case 1 | Case 2

Input

primeOne =
2

primeTwo =
5

Output

3

Expected