

Ignore my post if you only interested in getting your code pass the leetcode test, but not interested in how to do things right!!!

Most solutions posted here have used 'count distinct product\_key'. However, this method **should NOT be considered as the correct answer**. For example, if the **Product** table contains **5 & 7** instead of **5 & 6**, using 'count distinct product\_key', you will still get results of customer\_id **1 & 3**, which is definitely **WRONG!!!**

Product table:	
product_key	product_key
5	5
6	7
Result (Customer_id):	
1	1
3	3
Correct!	Wrong!

The correct procedures should be:

1. do a **cartesian product** (**cross join** in MySQL) on all customer\_id eg.1,2,3 from table Customer and all product\_key from table "Product ".

cartesian product:	
customer_id	product_key
1	5
1	6
2	5
2	6
3	5
3	6

2. find difference between table **Customer** and the **cartesian product**

cartesian product:		Customer table:	
customer_id	product_key	customer_id	product_key
1	5	1	5
1	6	2	6
2	5	3	5
2	6	3	6
3	5	1	6
3	6		

3. list all customer\_id not in the difference set (red row in the above table)

cartesian product:			
customer_id	product_key		Final Result
1	5	→	1
1	6		
2	5	✗	
2	6		
3	5	→	3
3	6		

**MySQL code:**

```
SELECT DISTINCT customer_id FROM Customer WHERE customer_id NOT IN (
SELECT customer_id FROM (
SELECT DISTINCT * FROM
(SELECT DISTINCT customer_id FROM Customer) C
CROSS JOIN Product P) C2
WHERE (customer_id,product_key) NOT IN (SELECT customer_id,product_key FROM
Customer));
```