Problem 3536: Maximum Product of Two Digits

Problem Information

Difficulty: Easy
Acceptance Rate: 69.37%
Paid Only: No
Tags: Math, Sorting

Problem Description

You are given a positive integer `n`.

Return the **maximum** product of any two digits in `n`.

Note: You may use the **same** digit twice if it appears more than once in `n`.

Example 1:

Input: n = 31

Output: 3

Explanation:

* The digits of `n` are `[3, 1]`. * The possible products of any two digits are: `3 * 1 = 3`. * The maximum product is 3.

Example 2:

Input: n = 22

Output: 4

Explanation:

* The digits of `n` are `[2, 2]`. * The possible products of any two digits are: `2 * 2 = 4`. * The maximum product is 4.

Example 3:

Input: n = 124

Output: 8

Explanation:

* The digits of `n` are `[1, 2, 4]`. * The possible products of any two digits are: `1 * 2 = 2`, `1 * 4 = 4`, `2 * 4 = 8`. * The maximum product is 8.

Constraints:

* `10 <= n <= 109`

Code Snippets

C++:

```cpp
class Solution {
public:
int maxProduct(int n) {

}
};
```

Java:

```java
class Solution {
public int maxProduct(int n) {

}
}
```

Python3:

```python
class Solution:
    def maxProduct(self, n: int) -> int:
```