Problem 991: Broken Calculator

Problem Information

Difficulty: Medium
Acceptance Rate: 55.65%
Paid Only: No
Tags: Math, Greedy

Problem Description

There is a broken calculator that has the integer `startValue` on its display initially. In one operation, you can:

* multiply the number on display by `2`, or * subtract `1` from the number on display.

Given two integers `startValue` and `target`, return _the minimum number of operations needed to display_`target` _on the calculator_.

Example 1:

Input: startValue = 2, target = 3 **Output:** 2 **Explanation:** Use double operation and then decrement operation {2 -> 4 -> 3}.

Example 2:

Input: startValue = 5, target = 8 **Output:** 2 **Explanation:** Use decrement and then double {5 -> 4 -> 8}.

Example 3:

Input: startValue = 3, target = 10 **Output:** 3 **Explanation:** Use double, decrement and double {3 -> 6 -> 5 -> 10}.

Constraints:

* `1 <= startValue, target <= 109`

Code Snippets

C++:

```
class Solution {
public:
int brokenCalc(int startValue, int target) {

}
};
```

Java:

```
class Solution {
public int brokenCalc(int startValue, int target) {

}
}
```

Python3:

```
class Solution:
def brokenCalc(self, startValue: int, target: int) -> int:
```