

5194. Minimum Moves to Reach Target Score

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You are playing a game with integers. You start with the integer 1 and you want to reach the integer target .

In one move, you can either:

- **Increment** the current integer by one (i.e., $x = x + 1$).
- **Double** the current integer (i.e., $x = 2 * x$).

You can use the **increment** operation **any** number of times, however, you can only use the **double** operation **at most** maxDoubles times.

Given the two integers target and maxDoubles , return the minimum number of moves needed to reach target starting with 1 .

User Accepted:	1
User Tried:	3
Total Accepted:	1
Total Submissions:	3
Difficulty:	Medium

Example 1:

Input: target = 5, maxDoubles = 0
Output: 4
Explanation: Keep incrementing by 1 until you reach target.

Example 2:

Input: target = 19, maxDoubles = 2
Output: 7
Explanation: Initially, x = 1
Increment 3 times so x = 4
Double once so x = 8
Increment once so x = 9
Double again so x = 18
Increment once so x = 19

Example 3:

Input: target = 10, maxDoubles = 4
Output: 4
Explanation: Initially, x = 1
Increment once so x = 2
Double once so x = 4
Increment once so x = 5
Double again so x = 10

Constraints:

- $1 \leq target \leq 10^9$
- $0 \leq maxDoubles \leq 100$

JavaScript

```
1 const minMoves = (target, maxDoubles) => {
2   let cnt = 0, cur = target;
3   while (cur > 1) {
4     if (maxDoubles > 0) {
5       if (cur % 2 == 0) {
6         cur /= 2;
7         cnt++;
8         maxDoubles--;
9       }
10    }
11    cur--;
12    cnt++;
13  }
14  return cnt;
```

```
9      } else {  
10         cur--;  
11         cnt++;  
12     }  
13 } else {  
14     cnt += cur - 1;  
15     break;  
16 }  
17 }  
18 return cnt;  
19 };
```

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