

Minimum Moves to Reach Target Score

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*.

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:

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