In the "100 game" two players take turns adding, to a running total, any integer from 1 to 10. The player who first causes the running total to **reach or exceed** 100 wins.

What if we change the game so that players **cannot** re-use integers?

For example, two players might take turns drawing from a common pool of numbers from 1 to 15 without replacement until they reach a total >= 100.

Given two integers maxChoosableInteger and desiredTotal, return true if the first player to move can force a win, otherwise, return false. Assume both players play **optimally**.

**Example 1:**

**Input:** maxChoosableInteger = 10, desiredTotal = 11

**Output:** false

**Explanation:**

No matter which integer the first player choose, the first player will lose.

The first player can choose an integer from 1 up to 10.

If the first player choose 1, the second player can only choose integers from 2 up to 10.

The second player will win by choosing 10 and get a total = 11, which is >= desiredTotal.

Same with other integers chosen by the first player, the second player will always win.

**Example 2:**

**Input:** maxChoosableInteger = 10, desiredTotal = 0

**Output:** true

**Example 3:**

**Input:** maxChoosableInteger = 10, desiredTotal = 1

**Output:** true

**Constraints:**

* 1 <= maxChoosableInteger <= 20
* 0 <= desiredTotal <= 300