class Solution:

"""

@param m: An integer m denotes the size of a backpack

@param A: Given n items with size A[i]

@return: The maximum size

"""

def backPack(self, m, A):

# write your code here

dp = [[0 for i in range(m+1)] for i in range(2)]

for k in range(1,len(A)+1):

for i in range(1,m+1):

dp[1][i] = dp[0][i]

if i>=A[k-1]:

dp[1][i] = max(dp[0][i],dp[0][i-A[k-1]]+A[k-1])

#print dp

for i in range(1,m+1):

dp[0][i] = dp[1][i]

return dp[-1][-1]