def knapsack(values,weights,capacity):

n = len(values)

dp = [[0 for \_ in range(capacity+1)] for \_ in range(n+1)]

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

for w in range(1,capacity+1):

if weights[i-1] <= w:

dp[i][w] = max(dp[i-1][w], (dp[i-1][w - weights[i-1]] + values[i-1]))

else:

dp[i][w] = dp[i-1][w]

return dp[-1][-1]

def main():

n = int(input("Enter the number of items : "))

values = []

weights = []

for i in range(n):

weight = int(input(f'Enter weight of item {i+1} : '))

value = int(input(f'Enter value of item {i+1} : '))

weights.append(weight)

values.append(value)

capacity = int(input("Enter the capacity of the Knapsack : "))

total\_value = knapsack(values,weights,capacity)

print(f'Total value of knapsack : {total\_value:.2f}')

main()