public class Knapsack {

public static int knapsack(int[] weight, int[] profit, int w, int n) {

if (n == 0 || w == 0) {

return 0;

}

if (weight[n - 1] > w) {

return knapsack(weight, profit, w, n - 1);

} else {

int include = profit[n - 1] + knapsack(weight, profit, w - weight[n - 1], n - 1);

int exclude = knapsack(weight, profit, w, n - 1);

return Math.max(include, exclude);

}

}

public static void main(String[] args) {

int w1 = 4;

int[] profit1 = {1, 2, 3};

int[] weight1 = {4, 5, 1};

int n1 = profit1.length;

int result = knapsack(weight1, profit1, w1, n1);

System.out.println("Output for Test case: " + result);

}

}