## Problem 3: Let the Good Times Roll

To help foster the continued existence of the Dungeons and Dragons (DnD) fantasy roleplaying game into the 21st century, the International DnD Foundation has decreed that each time a player rolls the same number on each of the dice that they have thrown, the DungeonMaster (DM) can collect a handling fee of one dollar. To sweeten the deal, this law has been made retroactive, and applicable to any rolls for which records have been kept. This is fine and dandy by those fastidious DM that have kept complete records, in which the results for all dice thrown are preserved. However, those less energetic DM that have only kept records of the totals of the dice for each throw need some assistance. For example, if a DM only noted that two 6-sided dice were used on each throw and that the totals for the throws in a game were 3, 7, 9, and 8, only two throws could have resulted from identical values on each of the dice (6 = 3 + 3 and 8 = 4 + 4), so the maximum possible number of identical dice throws is 2.

Write a program which, given the sums of n throws of d r-sided dice such that  $n \ge 1$ ,  $d \ge 2$ , and  $r \ge 2$ , computes and outputs the maximum possible number of identical dice throws in those throws. Note that the throws data may have been corrupted in storage and could include nonsensical values (*e.g.*, negative or zero, which should be ignored. Your input will be an (n + 1)-line textfile in which the first lines gives the values of d and r and each of the remaining n lines gives the sum of a throw with d r-sided dice. You may assume that all input files are formatted correctly.

## Sample input #1 (available as file "test3.dat"):

Sample output #1:

2, 6 sided Dice produced a possible 2 identical dice rolls. Possible rolls: (6, 8) Sample input #2 (available as file "test3.dat"):

Sample output #2:

3, 4 sided Dice produced a possible 5 identical dice rolls. Possible rolls: (3, 3, 9, 3, 6)

**Sample input #3** (available as file "test3.dat"):

Sample output #3: