At Jane Street, our day-to-day work involves figuring out what's happening in financial markets and building algorithms and systems to do better trades. This often presents us with challenging and interesting problems. However, many of us also enjoy solving puzzles and playing games for their own sake. One game (technically, class of games) we like to play is called Blotto. Here is one instance:

There are 10 castles, numbered 1, 2, 3, ... , 10, and worth 1, 2, 3, ... , 10 points respectively. You have 100 soldiers, which you can allocate between the castles however you wish. Your opponent also (independently) does the same. The number of soldiers on each castle is then compared, and for each castle, whoever has the most soldiers on that castle wins its points (in the case of a tie, no one gets points).

For example, here is one match:

Castle	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10
Alice	10	10	10	10	10	10	10	10	10	10
Carol	20	0	10	5	10	5	10	20	0	20

In this match, Alice wins castles 2, 4, 6, 9, for a total of 21 points, and Carol wins castles 1, 8, 10, for a total of 19 points (no one wins castles 3, 5, 7).

We're going to play a tournament. You get one entry and your final score is the average of your scores playing head-to-head against entries from several hundred Jane Streeters. An entry should be submitted as a list of 10 non-negative integers, adding up to 100, where the nth element is the number of soldiers being sent to castle n.

What's your entry? How did you go about coming up with it?

How would your entry change if you were only allowed 90 soldiers? What about if you received 110 soliders? (In both cases everyone else still gets 100).