

	3	4	5	6	7	8	9	10
3	(0, 1, 2)	(0, 0, 1, 2)	(0, 0, 1, 1, 1)	(0, 0, 0, 1, 1, 1)	(0, 0, 0, 0, 1, 1, 1)	(0, 0, 0, 0, 0, 1, 1, 1)	(0, 0, 0, 0, 0, 0, 1, 1, 1)	(0, 0, 0, 0, 0, 0, 0, 1, 1, 1)
4	(0, 1, 3), (0, 2, 2)	(0, 1, 1, 2)	(0, 0, 1, 1, 2)	(0, 0, 1, 1, 1, 1)	(0, 0, 0, 1, 1, 1, 1), (0, 0, 1, 0, 1, 1, 1)	(0, 0, 0, 0, 1, 1, 1, 1), (0, 0, 0, 1, 0, 1, 1, 1)	(0, 0, 0, 0, 1, 0, 1, 1, 1)	(0, 0, 0, 0, 0, 1, 0, 1, 1, 1)
5	(0, 2, 3)	(0, 1, 1, 3)	(0, 0, 2, 1, 2)	(0, 0, 1, 1, 1, 2)	(0, 0, 1, 1, 1, 1, 1)	(0, 0, 1, 0, 1, 1, 1, 1)	(0, 0, 1, 0, 0, 1, 1, 1, 1)	(0, 0, 0, 1, 0, 0, 1, 1, 1, 1)
6	(0, 2, 4), (0, 3, 3)	(0, 1, 2, 3)	(0, 0, 2, 1, 3)	(0, 1, 1, 1, 1, 2)	(0, 0, 1, 1, 1, 1, 2)	(0, 0, 1, 1, 1, 1, 1, 1)	(0, 0, 1, 0, 1, 1, 1, 1, 1)	(0, 0, 1, 0, 0, 1, 1, 1, 1, 1)
7	(0, 3, 4)	(0, 1, 2, 4)	(0, 0, 3, 1, 3)	(0, 1, 1, 1, 2, 2)	(0, 1, 1, 1, 1, 1, 2)	(0, 0, 1, 1, 1, 1, 1, 2)	(0, 0, 1, 1, 1, 1, 1, 1, 1)	(0, 0, 1, 0, 1, 1, 1, 1, 1, 1)
8	(0, 3, 5), (0, 4, 4)	(0, 2, 2, 4)	(0, 0, 3, 1, 4)	(0, 1, 1, 2, 2, 2)	(0, 1, 1, 1, 1, 2, 2)	(0, 1, 1, 1, 1, 1, 1, 2)	(0, 0, 1, 1, 1, 1, 1, 1, 2)	(0, 0, 1, 1, 1, 1, 1, 1, 1, 1)
9	(0, 4, 5)	(0, 2, 2, 5)	(0, 0, 4, 1, 4)	(0, 1, 2, 1, 2, 3)	(0, 1, 2, 1, 1, 2, 2)	(0, 1, 1, 1, 1, 1, 2, 2)	(0, 1, 1, 1, 1, 1, 1, 1, 2)	(0, 1, 1, 1, 1, 1, 1, 1, 1, 1)
10	(0, 4, 6), (0, 5, 5)	(0, 2, 3, 5)	(0, 0, 4, 1, 5)	(0, 1, 2, 2, 2, 3)	(0, 1, 2, 1, 2, 2, 2)	(0, 1, 2, 1, 1, 1, 2, 2)	(0, 1, 1, 1, 1, 1, 1, 2, 2)	(0, 1, 1, 1, 1, 1, 1, 1, 1, 2)
11	(0, 5, 6)	(0, 2, 3, 6)	(0, 0, 5, 1, 5)	(0, 2, 2, 2, 2, 3)	(0, 1, 2, 1, 2, 2, 3)	(0, 1, 2, 2, 1, 1, 2, 2)	(0, 1, 2, 2, 1, 1, 1, 1, 2)	Not found

TABLE 1. The entries of this table contain all the optimal ways of allocating a number of soldiers, represented by the rows, amongst a number of castles, represented by the columns. Here, a tuple represents an entry that a player would submit.

	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10
(3, 6, 9, 10)			■			■			■	
(1, 3, 5, 9, 10)	■		■		■				■	■
(1, 3, 6, 8, 10)	■		■			■		■		■
(2, 3, 5, 8, 10)		■	■		■			■		■
(2, 3, 6, 7, 10)		■	■			■	■			■
(2, 3, 6, 8, 9)		■	■			■		■	■	
(2, 4, 5, 7, 10)		■		■	■		■			■
(2, 4, 5, 8, 9)		■		■	■			■	■	
(2, 4, 6, 7, 9)		■		■		■	■			■
(2, 5, 6, 7, 8)		■			■	■	■	■		
(3, 4, 5, 7, 9)			■	■	■		■		■	
(3, 4, 6, 7, 8)			■	■		■	■	■		
(1, 2, 3, 5, 7, 10)	■	■	■		■		■			■
(1, 2, 3, 5, 8, 9)	■	■	■		■			■	■	
(1, 2, 3, 6, 7, 9)	■	■	■			■	■			■
(1, 2, 4, 5, 7, 9)	■	■		■	■		■			■
(1, 2, 4, 6, 7, 8)	■	■		■		■	■	■		
(1, 3, 4, 5, 6, 9)	■		■	■	■	■			■	
(1, 3, 4, 5, 7, 8)	■		■	■	■	■	■			
(2, 3, 4, 5, 6, 8)		■	■	■	■	■		■		
Number of occurrences	9	13	14	10	12	11	11	10	10	7

FIGURE 1. A visualization of the combinations of castles needed to win a game of Colonel Blotto that are of interest. Here, a tuple represents a combination of castles. Moreover, a black square represents an allocation of importance as determined by the combination of castles being considered. The number of times a castle occurs over those 28 combinations is also displayed. I would like to understand the behavior behind the combinations of castles needed to win a game.