

TABLE 2. Magic Numbers and Related Quantities for k -sided dice, $2 \leq k \leq 24$.

\mathcal{S} = largest subset of \mathcal{F}_k such that $\text{rank}[\mathbf{C}_{\mathcal{S}}] < k^2$; $\mathbf{C}_{\mathcal{S}}$ = coefficient matrix generated by \mathcal{S} ; $m(k)$ = magic number for k -sided dice. In the column labelled \mathcal{S} , each row shows only the linear combination introduced in addition to the ones already present in the preceding rows. *Note:* Magic dice for $k = 23$ and $k = 24$ can also be constructed using the linear combinations (1, 4) and (4, 1) instead of (2, 3) and (3, 2).

k	\mathcal{S}	$\text{rows}(\mathbf{C}_{\mathcal{S}})$	$\text{rank}(\mathbf{C}_{\mathcal{S}})$	$m(k)$
2	(1, 0) (0, 1)	4	3	2
3	(1, 1)	11	8	3
4	(1, -1)	22	15	4
5		28	21	4
6	(1, 2)	50	34	5
7	(2, 1)	78	48	6
8		90	60	6
9	(1, -2)	127	79	7
10	(2, -1)	170	99	8
11		188	117	8
12		206	135	8
13	(1, 3)	273	166	9
14	(3, 1)	348	195	10
15		374	221	10
16		400	247	10
17	(1, -3)	491	286	11
18	(3, -1)	590	323	12
19		624	357	12
20		658	391	12
21	(2, 3)	791	439	13
22		830	478	13
23	(3, 2)	978	528	14
24		1022	572	14