

LF polytope V representation - part 1

August 21, 2024

We present the list of all possible LF-vertices of the convex polytope of all LF correlations. The notation follows the one used in our arXiv preprint, and j is also the same label as the label for the vertices of the 24 vertices of the convex polytope of the Bell scenario with two parties, each having two dichotomic measurement settings.

We follow the recipe for finding the vertices provided first by Bong. *et. al.* Nature Physics 16 (12), 1199-1205 (2020). The H-representation we find has the same number of facets reported in their work. This is only the first part of the list of all the vertices.

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	1	0	0	0
$\{A_1, B_2\}$	1	0	0	0
$\{A_1, B_3\}$	1	0	0	0
$\{A_2, B_1\}$	1	0	0	0
$\{A_2, B_2\}$	1	0	0	0
$\{A_2, B_3\}$	1	0	0	0
$\{A_3, B_1\}$	1	0	0	0
$\{A_3, B_2\}$	1	0	0	0
$\{A_3, B_3\}$	1	0	0	0

Table 1: $(c, d) = (0, 0)$, $j = 1$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	1	0	0	0
$\{A_1, B_2\}$	0	1	0	0
$\{A_1, B_3\}$	0	1	0	0
$\{A_2, B_1\}$	1	0	0	0
$\{A_2, B_2\}$	0	1	0	0
$\{A_2, B_3\}$	0	1	0	0
$\{A_3, B_1\}$	1	0	0	0
$\{A_3, B_2\}$	0	1	0	0
$\{A_3, B_3\}$	0	1	0	0

Table 2: $(c, d) = (0, 0)$, $j = 2$. $(x = 1, y \neq 1)$: $p(ab|xy) = \delta_{ac}p^j(b|y)$, $p(00|12) = p^{j=2}(00|01) + p^{j=2}(10|01)$.

	(0,0)	(0,1)	(1,0)	(1,1)
$\{A_1, B_1\}$	1	0	0	0
$\{A_1, B_2\}$	1	0	0	0
$\{A_1, B_3\}$	1	0	0	0
$\{A_2, B_1\}$	0	0	1	0
$\{A_2, B_2\}$	0	0	1	0
$\{A_2, B_3\}$	0	0	1	0
$\{A_3, B_1\}$	0	0	1	0
$\{A_3, B_2\}$	0	0	1	0
$\{A_3, B_3\}$	0	0	1	0

Table 3: $(c, d) = (0, 0)$, $j = 3$. $(x = 1, y \neq 1)$: $p(ab|xy) = \delta_{ac}p^j(b|y)$, $p(00|12) = p^{j=3}(00|01) + p^{j=3}(10|01)$, $p(01|12) = p^{j=3}(01|01) + p^{j=3}(11|01)$. $(x \neq 1, y = 1)$: $p(ab|xy) = \delta_{bd}p^j(a|x)$, $p(00|21) = p^{j=3}(00|10) + p^{j=3}(01|10)$.

	(0,0)	(0,1)	(1,0)	(1,1)
$\{A_1, B_1\}$	1	0	0	0
$\{A_1, B_2\}$	0	1	0	0
$\{A_1, B_3\}$	0	1	0	0
$\{A_2, B_1\}$	0	0	1	0
$\{A_2, B_2\}$	0	0	0	1
$\{A_2, B_3\}$	0	0	0	1
$\{A_3, B_1\}$	0	0	1	0
$\{A_3, B_2\}$	0	0	0	1
$\{A_3, B_3\}$	0	0	0	1

Table 4: $(c, d) = (0, 0)$, $j = 4$

	(0,0)	(0,1)	(1,0)	(1,1)
$\{A_1, B_1\}$	1	0	0	0
$\{A_1, B_2\}$	0	1	0	0
$\{A_1, B_3\}$	1	0	0	0
$\{A_2, B_1\}$	1	0	0	0
$\{A_2, B_2\}$	0	1	0	0
$\{A_2, B_3\}$	1	0	0	0
$\{A_3, B_1\}$	1	0	0	0
$\{A_3, B_2\}$	0	1	0	0
$\{A_3, B_3\}$	1	0	0	0

Table 5: $(c, d) = (0, 0)$, $j = 5$

	(0,0)	(0,1)	(1,0)	(1,1)
$\{A_1, B_1\}$	1	0	0	0
$\{A_1, B_2\}$	1	0	0	0
$\{A_1, B_3\}$	1	0	0	0
$\{A_2, B_1\}$	1	0	0	0
$\{A_2, B_2\}$	1	0	0	0
$\{A_2, B_3\}$	1	0	0	0
$\{A_3, B_1\}$	0	0	1	0
$\{A_3, B_2\}$	0	0	1	0
$\{A_3, B_3\}$	0	0	1	0

Table 6: $(c, d) = (0, 0)$, $j = 6$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	1	0	0	0
$\{A_1, B_2\}$	0	1	0	0
$\{A_1, B_3\}$	0	1	0	0
$\{A_2, B_1\}$	1	0	0	0
$\{A_2, B_2\}$	0	1	0	0
$\{A_2, B_3\}$	0	1	0	0
$\{A_3, B_1\}$	0	0	1	0
$\{A_3, B_2\}$	0	0	0	1
$\{A_3, B_3\}$	0	0	0	1

Table 7: $(c, d) = (0, 0)$, $j = 7$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	1	0	0	0
$\{A_1, B_2\}$	1	0	0	0
$\{A_1, B_3\}$	1	0	0	0
$\{A_2, B_1\}$	0	0	1	0
$\{A_2, B_2\}$	0	0	1	0
$\{A_2, B_3\}$	0	0	1	0
$\{A_3, B_1\}$	1	0	0	0
$\{A_3, B_2\}$	1	0	0	0
$\{A_3, B_3\}$	1	0	0	0

Table 8: $(c, d) = (0, 0)$, $j = 8$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	1	0	0	0
$\{A_1, B_2\}$	0	1	0	0
$\{A_1, B_3\}$	0	1	0	0
$\{A_2, B_1\}$	0	0	1	0
$\{A_2, B_2\}$	0	0	0	1
$\{A_2, B_3\}$	0	0	0	1
$\{A_3, B_1\}$	1	0	0	0
$\{A_3, B_2\}$	0	1	0	0
$\{A_3, B_3\}$	0	1	0	0

Table 9: $(c, d) = (0, 0)$, $j = 9$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	1	0	0	0
$\{A_1, B_2\}$	1	0	0	0
$\{A_1, B_3\}$	0	1	0	0
$\{A_2, B_1\}$	1	0	0	0
$\{A_2, B_2\}$	1	0	0	0
$\{A_2, B_3\}$	0	1	0	0
$\{A_3, B_1\}$	1	0	0	0
$\{A_3, B_2\}$	1	0	0	0
$\{A_3, B_3\}$	0	1	0	0

Table 10: $(c, d) = (0, 0)$, $j = 10$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	1	0	0	0
$\{A_1, B_2\}$	0	1	0	0
$\{A_1, B_3\}$	1	0	0	0
$\{A_2, B_1\}$	0	0	1	0
$\{A_2, B_2\}$	0	0	0	1
$\{A_2, B_3\}$	0	0	1	0
$\{A_3, B_1\}$	0	0	1	0
$\{A_3, B_2\}$	0	0	0	1
$\{A_3, B_3\}$	0	0	1	0

Table 11: $(c, d) = (0, 0)$, $j = 11$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	1	0	0	0
$\{A_1, B_2\}$	0	1	0	0
$\{A_1, B_3\}$	1	0	0	0
$\{A_2, B_1\}$	1	0	0	0
$\{A_2, B_2\}$	0	1	0	0
$\{A_2, B_3\}$	1	0	0	0
$\{A_3, B_1\}$	0	0	1	0
$\{A_3, B_2\}$	0	0	0	1
$\{A_3, B_3\}$	0	0	1	0

Table 12: $(c, d) = (0, 0)$, $j = 12$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	1	0	0	0
$\{A_1, B_2\}$	1	0	0	0
$\{A_1, B_3\}$	0	1	0	0
$\{A_2, B_1\}$	0	0	1	0
$\{A_2, B_2\}$	0	0	1	0
$\{A_2, B_3\}$	0	0	0	1
$\{A_3, B_1\}$	1	0	0	0
$\{A_3, B_2\}$	1	0	0	0
$\{A_3, B_3\}$	0	1	0	0

Table 13: $(c, d) = (0, 0)$, $j = 13$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	1	0	0	0
$\{A_1, B_2\}$	1	0	0	0
$\{A_1, B_3\}$	0	1	0	0
$\{A_2, B_1\}$	0	0	1	0
$\{A_2, B_2\}$	0	0	1	0
$\{A_2, B_3\}$	0	0	0	1
$\{A_3, B_1\}$	0	0	1	0
$\{A_3, B_2\}$	0	0	1	0
$\{A_3, B_3\}$	0	0	0	1

Table 14: $(c, d) = (0, 0)$, $j = 14$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	1	0	0	0
$\{A_1, B_2\}$	1	0	0	0
$\{A_1, B_3\}$	0	1	0	0
$\{A_2, B_1\}$	1	0	0	0
$\{A_2, B_2\}$	1	0	0	0
$\{A_2, B_3\}$	0	1	0	0
$\{A_3, B_1\}$	0	0	1	0
$\{A_3, B_2\}$	0	0	1	0
$\{A_3, B_3\}$	0	0	0	1

Table 15: $(c, d) = (0, 0)$, $j = 15$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	1	0	0	0
$\{A_1, B_2\}$	0	1	0	0
$\{A_1, B_3\}$	1	0	0	0
$\{A_2, B_1\}$	0	0	1	0
$\{A_2, B_2\}$	0	0	0	1
$\{A_2, B_3\}$	0	0	1	0
$\{A_3, B_1\}$	1	0	0	0
$\{A_3, B_2\}$	0	1	0	0
$\{A_3, B_3\}$	1	0	0	0

Table 16: $(c, d) = (0, 0)$, $j = 16$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	1	0	0	0
$\{A_1, B_2\}$	$\frac{1}{2}$	$\frac{1}{2}$	0	0
$\{A_1, B_3\}$	$\frac{1}{2}$	$\frac{1}{2}$	0	0
$\{A_2, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_2, B_2\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$
$\{A_2, B_3\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$
$\{A_3, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_3, B_2\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$
$\{A_3, B_3\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0

Table 17: $(c, d) = (0, 0)$, $j = 17$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	1	0	0	0
$\{A_1, B_2\}$	$\frac{1}{2}$	$\frac{1}{2}$	0	0
$\{A_1, B_3\}$	$\frac{1}{2}$	$\frac{1}{2}$	0	0
$\{A_2, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_2, B_2\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0
$\{A_2, B_3\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0
$\{A_3, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_3, B_2\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0
$\{A_3, B_3\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$

Table 18: $(c, d) = (0, 0)$, $j = 18$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	1	0	0	0
$\{A_1, B_2\}$	$\frac{1}{2}$	$\frac{1}{2}$	0	0
$\{A_1, B_3\}$	$\frac{1}{2}$	$\frac{1}{2}$	0	0
$\{A_2, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_2, B_2\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$
$\{A_2, B_3\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0
$\{A_3, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_3, B_2\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$
$\{A_3, B_3\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$

Table 19: $(c, d) = (0, 0)$, $j = 19$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	1	0	0	0
$\{A_1, B_2\}$	$\frac{1}{2}$	$\frac{1}{2}$	0	0
$\{A_1, B_3\}$	$\frac{1}{2}$	$\frac{1}{2}$	0	0
$\{A_2, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_2, B_2\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0
$\{A_2, B_3\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$
$\{A_3, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_3, B_2\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0
$\{A_3, B_3\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0

Table 20: $(c, d) = (0, 0)$, $j = 20$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	1	0	0	0
$\{A_1, B_2\}$	$\frac{1}{2}$	$\frac{1}{2}$	0	0
$\{A_1, B_3\}$	$\frac{1}{2}$	$\frac{1}{2}$	0	0
$\{A_2, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_2, B_2\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$
$\{A_2, B_3\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$
$\{A_3, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_3, B_2\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0
$\{A_3, B_3\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$

Table 21: $(c, d) = (0, 0)$, $j = 21$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	1	0	0	0
$\{A_1, B_2\}$	$\frac{1}{2}$	$\frac{1}{2}$	0	0
$\{A_1, B_3\}$	$\frac{1}{2}$	$\frac{1}{2}$	0	0
$\{A_2, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_2, B_2\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0
$\{A_2, B_3\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0
$\{A_3, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_3, B_2\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$
$\{A_3, B_3\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0

Table 22: $(c, d) = (0, 0)$, $j = 22$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	1	0	0	0
$\{A_1, B_2\}$	$\frac{1}{2}$	$\frac{1}{2}$	0	0
$\{A_1, B_3\}$	$\frac{1}{2}$	$\frac{1}{2}$	0	0
$\{A_2, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_2, B_2\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$
$\{A_2, B_3\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0
$\{A_3, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_3, B_2\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0
$\{A_3, B_3\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0

Table 23: $(c, d) = (0, 0)$, $j = 23$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	1	0	0	0
$\{A_1, B_2\}$	$\frac{1}{2}$	$\frac{1}{2}$	0	0
$\{A_1, B_3\}$	$\frac{1}{2}$	$\frac{1}{2}$	0	0
$\{A_2, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_2, B_2\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0
$\{A_2, B_3\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$
$\{A_3, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_3, B_2\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$
$\{A_3, B_3\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$

Table 24: $(c, d) = (0, 0)$, $j = 24$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	0	0	1	0
$\{A_1, B_2\}$	0	0	1	0
$\{A_1, B_3\}$	0	0	1	0
$\{A_2, B_1\}$	1	0	0	0
$\{A_2, B_2\}$	1	0	0	0
$\{A_2, B_3\}$	1	0	0	0
$\{A_3, B_1\}$	1	0	0	0
$\{A_3, B_2\}$	1	0	0	0
$\{A_3, B_3\}$	1	0	0	0

Table 25: $(c, d) = (1, 0)$, $j = 1$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	0	0	1	0
$\{A_1, B_2\}$	0	0	0	1
$\{A_1, B_3\}$	0	0	0	1
$\{A_2, B_1\}$	1	0	0	0
$\{A_2, B_2\}$	0	1	0	0
$\{A_2, B_3\}$	0	1	0	0
$\{A_3, B_1\}$	1	0	0	0
$\{A_3, B_2\}$	0	1	0	0
$\{A_3, B_3\}$	0	1	0	0

Table 26: $(c, d) = (1, 0)$, $j = 2$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	0	0	1	0
$\{A_1, B_2\}$	0	0	1	0
$\{A_1, B_3\}$	0	0	1	0
$\{A_2, B_1\}$	0	0	1	0
$\{A_2, B_2\}$	0	0	1	0
$\{A_2, B_3\}$	0	0	1	0
$\{A_3, B_1\}$	0	0	1	0
$\{A_3, B_2\}$	0	0	1	0
$\{A_3, B_3\}$	0	0	1	0

Table 27: $(c, d) = (1, 0)$, $j = 3$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	0	0	1	0
$\{A_1, B_2\}$	0	0	0	1
$\{A_1, B_3\}$	0	0	0	1
$\{A_2, B_1\}$	0	0	1	0
$\{A_2, B_2\}$	0	0	0	1
$\{A_2, B_3\}$	0	0	0	1
$\{A_3, B_1\}$	0	0	1	0
$\{A_3, B_2\}$	0	0	0	1
$\{A_3, B_3\}$	0	0	0	1

Table 28: $(c, d) = (1, 0)$, $j = 4$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	0	0	1	0
$\{A_1, B_2\}$	0	0	0	1
$\{A_1, B_3\}$	0	0	1	0
$\{A_2, B_1\}$	1	0	0	0
$\{A_2, B_2\}$	0	1	0	0
$\{A_2, B_3\}$	1	0	0	0
$\{A_3, B_1\}$	1	0	0	0
$\{A_3, B_2\}$	0	1	0	0
$\{A_3, B_3\}$	1	0	0	0

Table 29: $(c, d) = (1, 0)$, $j = 5$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	0	0	1	0
$\{A_1, B_2\}$	0	0	1	0
$\{A_1, B_3\}$	0	0	1	0
$\{A_2, B_1\}$	1	0	0	0
$\{A_2, B_2\}$	1	0	0	0
$\{A_2, B_3\}$	1	0	0	0
$\{A_3, B_1\}$	0	0	1	0
$\{A_3, B_2\}$	0	0	1	0
$\{A_3, B_3\}$	0	0	1	0

Table 30: $(c, d) = (1, 0)$, $j = 6$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	0	0	1	0
$\{A_1, B_2\}$	0	0	0	1
$\{A_1, B_3\}$	0	0	0	1
$\{A_2, B_1\}$	1	0	0	0
$\{A_2, B_2\}$	0	1	0	0
$\{A_2, B_3\}$	0	1	0	0
$\{A_3, B_1\}$	0	0	1	0
$\{A_3, B_2\}$	0	0	0	1
$\{A_3, B_3\}$	0	0	0	1

Table 31: $(c, d) = (1, 0)$, $j = 7$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	0	0	1	0
$\{A_1, B_2\}$	0	0	1	0
$\{A_1, B_3\}$	0	0	1	0
$\{A_2, B_1\}$	0	0	1	0
$\{A_2, B_2\}$	0	0	1	0
$\{A_2, B_3\}$	0	0	1	0
$\{A_3, B_1\}$	1	0	0	0
$\{A_3, B_2\}$	1	0	0	0
$\{A_3, B_3\}$	1	0	0	0

Table 32: $(c, d) = (1, 0)$, $j = 8$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	0	0	1	0
$\{A_1, B_2\}$	0	0	0	1
$\{A_1, B_3\}$	0	0	0	1
$\{A_2, B_1\}$	0	0	1	0
$\{A_2, B_2\}$	0	0	0	1
$\{A_2, B_3\}$	0	0	0	1
$\{A_3, B_1\}$	1	0	0	0
$\{A_3, B_2\}$	0	1	0	0
$\{A_3, B_3\}$	0	1	0	0

Table 33: $(c, d) = (1, 0)$, $j = 9$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	0	0	1	0
$\{A_1, B_2\}$	0	0	1	0
$\{A_1, B_3\}$	0	0	0	1
$\{A_2, B_1\}$	1	0	0	0
$\{A_2, B_2\}$	1	0	0	0
$\{A_2, B_3\}$	0	1	0	0
$\{A_3, B_1\}$	1	0	0	0
$\{A_3, B_2\}$	1	0	0	0
$\{A_3, B_3\}$	0	1	0	0

Table 34: $(c, d) = (1, 0)$, $j = 10$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	0	0	1	0
$\{A_1, B_2\}$	0	0	0	1
$\{A_1, B_3\}$	0	0	1	0
$\{A_2, B_1\}$	0	0	1	0
$\{A_2, B_2\}$	0	0	0	1
$\{A_2, B_3\}$	0	0	1	0
$\{A_3, B_1\}$	0	0	1	0
$\{A_3, B_2\}$	0	0	0	1
$\{A_3, B_3\}$	0	0	1	0

Table 35: $(c, d) = (1, 0)$, $j = 11$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	0	0	1	0
$\{A_1, B_2\}$	0	0	0	1
$\{A_1, B_3\}$	0	0	1	0
$\{A_2, B_1\}$	1	0	0	0
$\{A_2, B_2\}$	0	1	0	0
$\{A_2, B_3\}$	1	0	0	0
$\{A_3, B_1\}$	0	0	1	0
$\{A_3, B_2\}$	0	0	0	1
$\{A_3, B_3\}$	0	0	1	0

Table 36: $(c, d) = (1, 0)$, $j = 12$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	0	0	1	0
$\{A_1, B_2\}$	0	0	1	0
$\{A_1, B_3\}$	0	0	0	1
$\{A_2, B_1\}$	0	0	1	0
$\{A_2, B_2\}$	0	0	1	0
$\{A_2, B_3\}$	0	0	0	1
$\{A_3, B_1\}$	1	0	0	0
$\{A_3, B_2\}$	1	0	0	0
$\{A_3, B_3\}$	0	1	0	0

Table 37: $(c, d) = (1, 0)$, $j = 13$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	0	0	1	0
$\{A_1, B_2\}$	0	0	1	0
$\{A_1, B_3\}$	0	0	0	1
$\{A_2, B_1\}$	0	0	1	0
$\{A_2, B_2\}$	0	0	1	0
$\{A_2, B_3\}$	0	0	0	1
$\{A_3, B_1\}$	0	0	1	0
$\{A_3, B_2\}$	0	0	1	0
$\{A_3, B_3\}$	0	0	0	1

Table 38: $(c, d) = (1, 0)$, $j = 14$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	0	0	1	0
$\{A_1, B_2\}$	0	0	1	0
$\{A_1, B_3\}$	0	0	0	1
$\{A_2, B_1\}$	1	0	0	0
$\{A_2, B_2\}$	1	0	0	0
$\{A_2, B_3\}$	0	1	0	0
$\{A_3, B_1\}$	0	0	1	0
$\{A_3, B_2\}$	0	0	1	0
$\{A_3, B_3\}$	0	0	0	1

Table 39: $(c, d) = (1, 0)$, $j = 15$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	0	0	1	0
$\{A_1, B_2\}$	0	0	0	1
$\{A_1, B_3\}$	0	0	1	0
$\{A_2, B_1\}$	0	0	1	0
$\{A_2, B_2\}$	0	0	0	1
$\{A_2, B_3\}$	0	0	1	0
$\{A_3, B_1\}$	1	0	0	0
$\{A_3, B_2\}$	0	1	0	0
$\{A_3, B_3\}$	1	0	0	0

Table 40: $(c, d) = (1, 0)$, $j = 16$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	0	0	1	0
$\{A_1, B_2\}$	0	0	$\frac{1}{2}$	$\frac{1}{2}$
$\{A_1, B_3\}$	0	0	$\frac{1}{2}$	$\frac{1}{2}$
$\{A_2, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_2, B_2\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$
$\{A_2, B_3\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$
$\{A_3, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_3, B_2\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$
$\{A_3, B_3\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0

Table 41: $(c, d) = (1, 0)$, $j = 17$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	0	0	1	0
$\{A_1, B_2\}$	0	0	$\frac{1}{2}$	$\frac{1}{2}$
$\{A_1, B_3\}$	0	0	$\frac{1}{2}$	$\frac{1}{2}$
$\{A_2, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_2, B_2\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0
$\{A_2, B_3\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0
$\{A_3, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_3, B_2\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0
$\{A_3, B_3\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$

Table 42: $(c, d) = (1, 0)$, $j = 18$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	0	0	1	0
$\{A_1, B_2\}$	0	0	$\frac{1}{2}$	$\frac{1}{2}$
$\{A_1, B_3\}$	0	0	$\frac{1}{2}$	$\frac{1}{2}$
$\{A_2, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_2, B_2\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$
$\{A_2, B_3\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0
$\{A_3, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_3, B_2\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$
$\{A_3, B_3\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$

Table 43: $(c, d) = (1, 0)$, $j = 19$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	0	0	1	0
$\{A_1, B_2\}$	0	0	$\frac{1}{2}$	$\frac{1}{2}$
$\{A_1, B_3\}$	0	0	$\frac{1}{2}$	$\frac{1}{2}$
$\{A_2, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_2, B_2\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0
$\{A_2, B_3\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$
$\{A_3, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_3, B_2\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0
$\{A_3, B_3\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0

Table 44: $(c, d) = (1, 0)$, $j = 20$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	0	0	1	0
$\{A_1, B_2\}$	0	0	$\frac{1}{2}$	$\frac{1}{2}$
$\{A_1, B_3\}$	0	0	$\frac{1}{2}$	$\frac{1}{2}$
$\{A_2, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_2, B_2\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$
$\{A_2, B_3\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$
$\{A_3, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_3, B_2\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0
$\{A_3, B_3\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$

Table 45: $(c, d) = (1, 0)$, $j = 21$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	0	0	1	0
$\{A_1, B_2\}$	0	0	$\frac{1}{2}$	$\frac{1}{2}$
$\{A_1, B_3\}$	0	0	$\frac{1}{2}$	$\frac{1}{2}$
$\{A_2, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_2, B_2\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0
$\{A_2, B_3\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0
$\{A_3, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_3, B_2\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$
$\{A_3, B_3\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0

Table 46: $(c, d) = (1, 0)$, $j = 22$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	0	0	1	0
$\{A_1, B_2\}$	0	0	$\frac{1}{2}$	$\frac{1}{2}$
$\{A_1, B_3\}$	0	0	$\frac{1}{2}$	$\frac{1}{2}$
$\{A_2, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_2, B_2\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$
$\{A_2, B_3\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0
$\{A_3, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_3, B_2\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0
$\{A_3, B_3\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0

Table 47: $(c, d) = (1, 0)$, $j = 23$

	(0, 0)	(0, 1)	(1, 0)	(1, 1)
$\{A_1, B_1\}$	0	0	1	0
$\{A_1, B_2\}$	0	0	$\frac{1}{2}$	$\frac{1}{2}$
$\{A_1, B_3\}$	0	0	$\frac{1}{2}$	$\frac{1}{2}$
$\{A_2, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_2, B_2\}$	0	$\frac{1}{2}$	$\frac{1}{2}$	0
$\{A_2, B_3\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$
$\{A_3, B_1\}$	$\frac{1}{2}$	0	$\frac{1}{2}$	0
$\{A_3, B_2\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$
$\{A_3, B_3\}$	$\frac{1}{2}$	0	0	$\frac{1}{2}$

Table 48: $(c, d) = (1, 0)$, $j = 24$