

Number of children	Frequency
1	2
2	6
3	4
4	2
5	1
6	1
7	1
8	1
9	1
10	1



The heatmap displays the frequency of the number of non-zero elements in the product of two sparse matrices. The x-axis (number of non-zero elements in the first matrix) ranges from 1 to 9, and the y-axis (number of non-zero elements in the second matrix) ranges from 12 to 21. The color scale indicates the frequency, ranging from 0 (dark purple) to 12 (yellow). The distribution is concentrated in the lower-left region, with a peak of 12 at (1, 12).

Number of non-zero elements in the first matrix (x)	Number of non-zero elements in the second matrix (y)	Frequency (Color)
1	12	12
1	13	11
1	14	10
1	15	9
1	16	8
1	17	7
1	18	6
1	19	5
1	20	4
1	21	3
2	12	11
2	13	10
2	14	9
2	15	8
2	16	7
2	17	6
2	18	5
2	19	4
2	20	3
2	21	2
3	12	10
3	13	9
3	14	8
3	15	7
3	16	6
3	17	5
3	18	4
3	19	3
3	20	2
3	21	1
4	12	9
4	13	8
4	14	7
4	15	6
4	16	5
4	17	4
4	18	3
4	19	2
4	20	1
4	21	0
5	12	8
5	13	7
5	14	6
5	15	5
5	16	4
5	17	3
5	18	2
5	19	1
5	20	0
5	21	0
6	12	7
6	13	6
6	14	5
6	15	4
6	16	3
6	17	2
6	18	1
6	19	0
6	20	0
6	21	0
7	12	6
7	13	5
7	14	4
7	15	3
7	16	2
7	17	1
7	18	0
7	19	0
7	20	0
7	21	0
8	12	5
8	13	4
8	14	3
8	15	2
8	16	1
8	17	0
8	18	0
8	19	0
8	20	0
8	21	0
9	12	4
9	13	3
9	14	2
9	15	1
9	16	0
9	17	0
9	18	0
9	19	0
9	20	0
9	21	0

