• Part 1, showing the truth table and truth table equations.
Truth Table:

	J	K	L	M	f(J,K,L,M)
0	0	0	0	0	0
1	0	0	0	1	0
2	0	0	1	0	0
3	0	0	1	1	1
4	0	1	0	0	0
5	0	1	0	1	0
6	0	1	1	0	1
7	0	1	1	1	1
8	1	0	0	0	0
9	1	0	0	1	1
10	1	0	1	0	1
11	1	0	1	1	1
12	1	1	0	0	1
13	1	1	0	1	1
14	1	1	1	0	1
15	1	1	1	1	1

Minterm: J’K’LM + J’KLM’ + J’KLM + JK’L’M + JK’LM’ + JK’LM + JKL’M’ + JKL’M + JKLM’ + JKLM
Sigma Notation: Σ (3, 6, 7, 9, 10, 11, 12, 13, 14, 15)

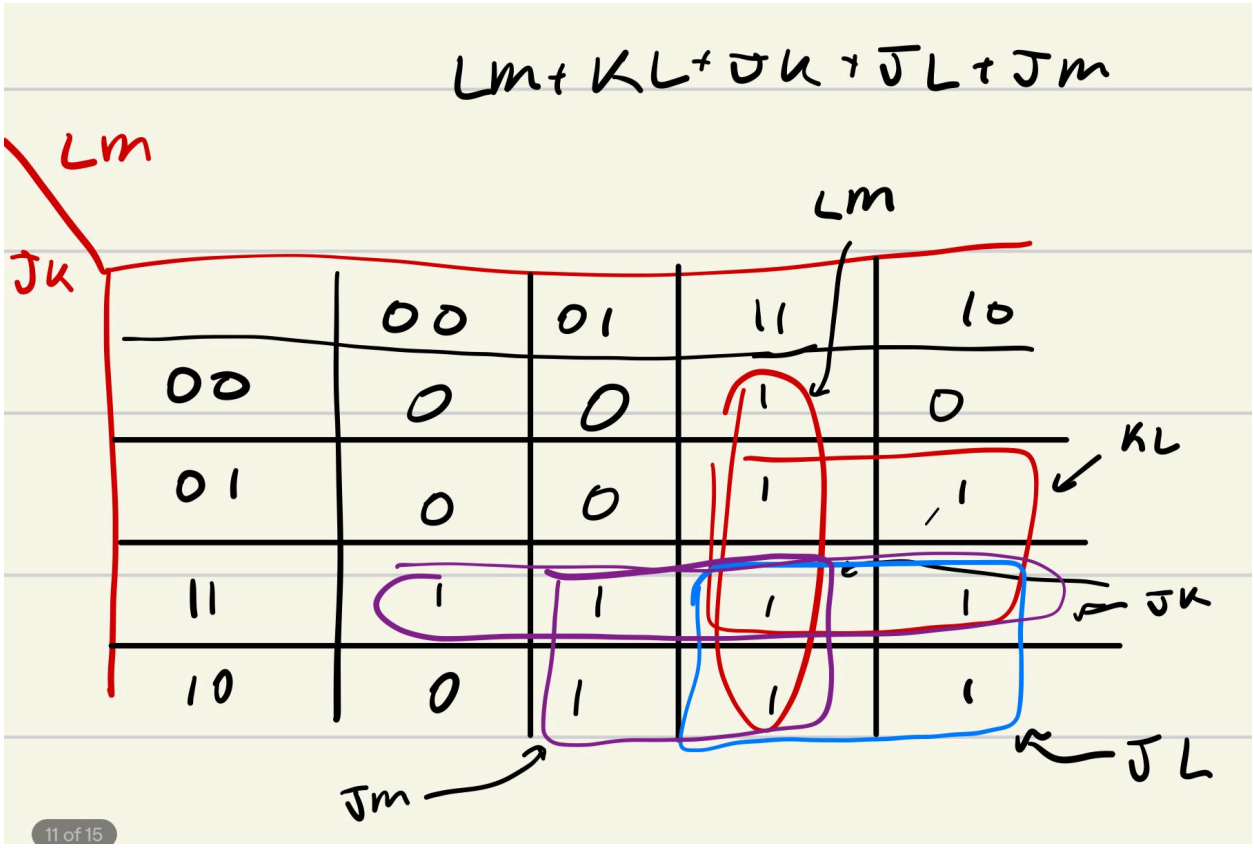
Maxterm:
(J+K+L+M) * (J+K+L+M’) * (J+K+L’+M) * (J+K’+L+M) * (J+K’+L+M’) * (J’+K+L+M)
Pi Notation: Π (0, 1, 2, 4, 5, 8)

• Part 2, showing the K-Map and the verification truth table.

K-map:

	L’M’ 00	L’M 01	LM 11	LM’ 10

J'K' 00	0	0	1	0
J'K 01	0	0	1	1
JK 11	1	1	1	1
JK' 10	0	1	1	1



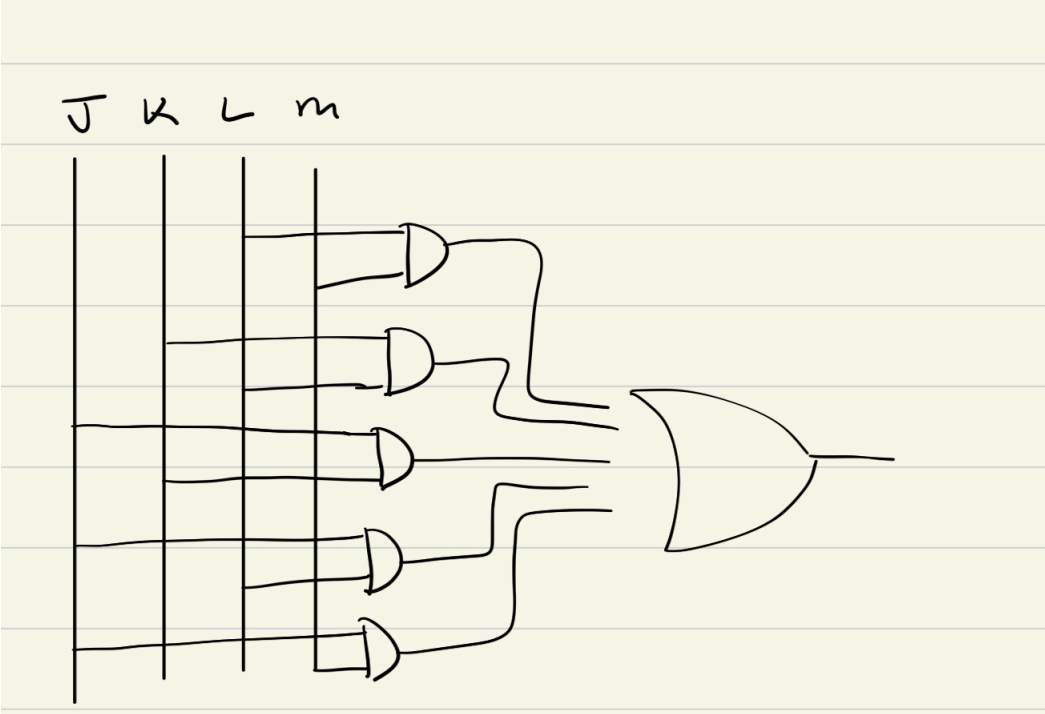
Normalized Function: JK + JM + LM + LK + LJ

Verification Truth table:

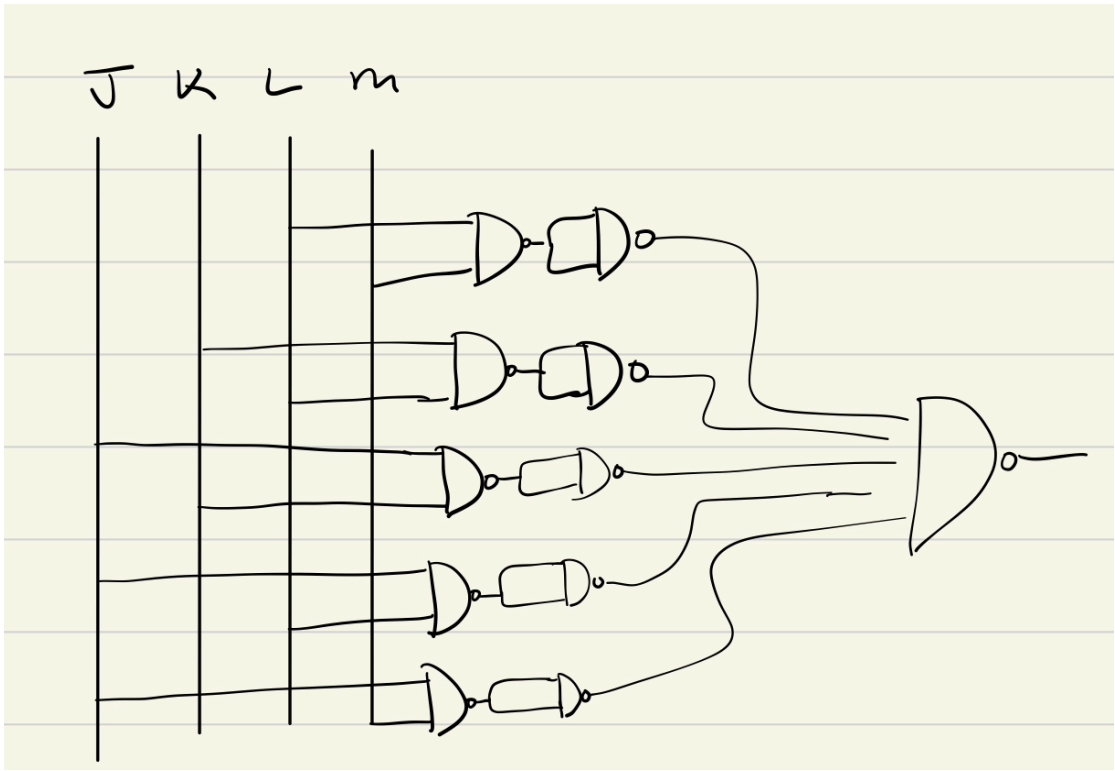
	J	K	L	M	f(J,K,L,M)
0	0	0	0	0	0
1	0	0	0	1	0
2	0	0	1	0	0
3	0	0	1	1	1
4	0	1	0	0	0

5	0	1	0	1	0
6	0	1	1	0	1
7	0	1	1	1	1
8	1	0	0	0	0
9	1	0	0	1	1
10	1	0	1	0	1
11	1	0	1	1	1
12	1	1	0	0	1
13	1	1	0	1	1
14	1	1	1	0	1
15	1	1	1	1	1

• Part 3, showing the two circuit drawings



NAND conversion


J K L M