NOTE: Feel free to rearrange the order of minterms if your program can handle the shuffle
Cross-checked using: Quine-McCluskey calculator

Input	DC?	Output
	3-Variables	
0,5,7	NO	A'B'C' + AC
2,3,4	NO	A'B + AB'C'
0,6,7	NO	A'B'C' + AB
	4-Variables	
[A] 0,2,3,5,6,7,8,9	NO	A'B'D' + A'C + A'BD + AB'C'
[A] 0,2,3,5,6,7,8,9	YES: 10,11,12,13,14,15	B'D' + C + BD + A
[B] 0,1,2,3,4,7,8,9	NO	A'B' + A'C'D' + A'CD + B'C'
[B] 0,1,2,3,4,7,8,9	YES: 10,11,12,13,14,15	B' + C'D' + CD
[C] 0,1,3,4,5,6,7,8,9	NO	A'D + A'B + B'C'
[C] 0,1,3,4,5,6,7,8,9	YES: 10,11,12,13,14,15	C' + D + B
[D] 0,2,3,5,6,8,9	NO	B'C'D' + A'B'C + A'BC'D + A'CD' + AB'C'
[D] 0,2,3,5,6,8,9	YES: 10,11,12,13,14,15	B'D' + B'C + BC'D + CD' + A
[E] 0,2,6,8	NO	A'CD' + B'C'D'
[E] 0,2,6,8	YES: 10,11,12,13,14,15	B'D' + CD'
[F] 0,4,5,6,8,9	NO	A'C'D' + A'BC' + A'BD' + AB'C'
[F] 0,4,5,6,8,9	YES: 10,11,12,13,14,15	C'D' + BC' + BD' + A
[G] 2,3,4,5,6,8,9	NO	A'CD' + A'B'C + A'BC' + AB'C'
[G] 2,3,4,5,6,8,9	YES: 10,11,12,13,14,15	BD' + B'C + BC' + A
10,11,12,13,14,15	NO	AC + AB
	5 onwards	
20, 28, 52, 60	NO	BDE'F'
6, 9, 13, 18, 19, 25, 27, 29, 41, 45, 57, 61	NO	A'BD'EF + A'B'C'DEF' + CE'F + A'BC'D'E
1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21	NO	A'E + B'C'E + B'D'E
0, 3, 5, 7, 10, 12, 14, 16, 18, 20	NO	B'C'D'E' + A'B'DE + A'B'CE + A'BDE' + A'BCE' + AB'C'E' + AB'D'E'
0, 3, 5, 7, 10, 12, 14, 16, 18, 20	YES: 1, 2, 4, 6, 8, 9, 11, 13, 15, 17, 19, 21, 22, 23	A' + B'
0, 2, 4, 8, 16, 32, 64, 128, 256, 512	NO	A'B'C'D'E'F'G'H'J' + A'B'C'D'E'F'G'I'J' + A'B'C'D'E'F'H'I'J' + A'B'C'D'E'G'H'I'J' + A'B'C'D'F'G'H'I'J' + A'B'C'E'F'G'H'I'J' + A'B'D'E'F'G'H'I'J' + A'C'D'E'F'G'H'I'J' + B'C'D'E'F'G'H'I'J'
0, 2, 4, 8, 16, 32, 64, 128, 256, 512	YES 1, 3, 5, 7, 9, 11, 13, 15, 17, 19	A'B'C'D'E'F'G'H' + A'B'C'D'E'F'G'I' + A'B'C'D'E'F'H'I' + A'B'C'D'E'G'H'I' + A'B'C'D'F'G'H'I'J' + A'B'C'E'F'G'H'I'J' + A'B'D'E'F'G'H'I'J' + A'C'D'E'F'G'H'I'J' + B'C'D'E'F'G'H'I'J'
0, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024	NO	A'B'C'D'E'F'G'H'I'K' + A'B'C'D'E'F'G'H'J'K' + A'B'C'D'E'F'G'I'J'K' + A'B'C'D'E'F'H'I'J'K' + A'B'C'D'E'G'H'I'J'K' + A'B'C'D'F'G'H'I'J'K' + A'B'C'E'F'G'H'I'J'K' + A'B'D'E'F'G'H'I'J'K' + A'C'D'E'F'G'H'I'J'K' + B'C'D'E'F'G'H'I'J'K'
0, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024	YES 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21	A'B'C'D'E'F'G'H'I' + A'B'C'D'E'F'G'H'J' + A'B'C'D'E'F'G'I'J' + A'B'C'D'E'F'H'I'J' + A'B'C'D'E'G'H'I'J'K' + A'B'C'D'F'G'H'I'J'K' + A'B'C'E'F'G'H'I'J'K' + A'B'D'E'F'G'H'I'J'K' + A'C'D'E'F'G'H'I'J'K' + B'C'D'E'F'G'H'I'J'K'
0, 2, 5, 8, 10, 16, 18, 20, 24, 26, 32	NO	A'D'F' + A'B'C'DE'F + A'BC'E'F' + B'C'D'E'F'
0, 2, 5, 8, 10, 16, 18, 20, 24, 26, 32	YES 1, 3, 6, 9, 11, 14, 17, 19, 22, 25, 31	A'B'C'E'F + A'BC'F' + A'D'F' + B'C'D'E'F'