

# Digital Logic 32 minterm Kmap

Using a K-map, write the Boolean equation that identifies prime numbers between 0 and 31

$$F(a,b,c,d,e) =$$

Prime = 1, 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31

bc \ de	00	01	11	10
00	0	1	3	2
01	4	5	7	6
11	12	13	15	14
10	8	9	11	10

bc \ de	00	01	11	10
00	16	17	19	18
01	20	21	23	22
11	28	29	31	30
10	24	25	27	26

a=0

a=1

1011

01100

$$F = a'b'e + a'b'c'd + bcd'e + acde + bc'e + ac'de$$