Electronic Dice – Version 1a

Truthtable

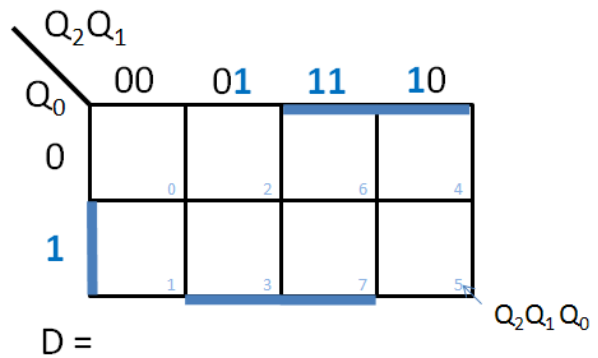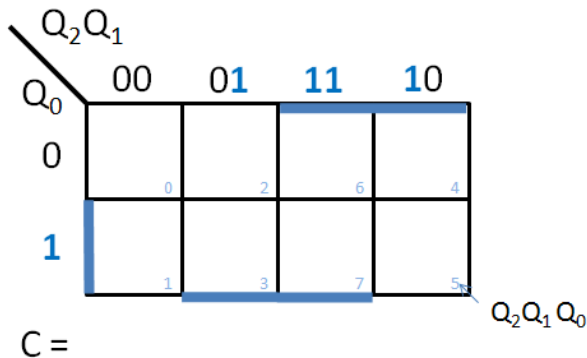| $Q_2Q_1Q_0$	A	B	C	D
0 0 0				
0 0 1				
0 1 0				
0 1 1				
1 0 0				
1 0 1				
1 1 0				
1 1 1				
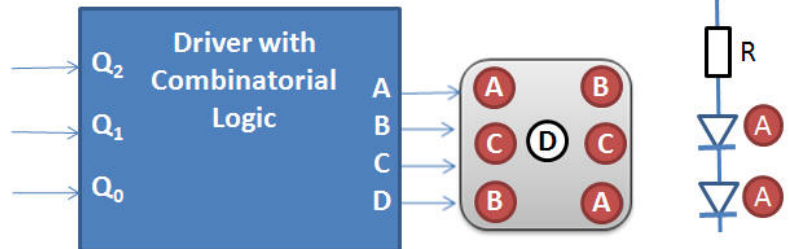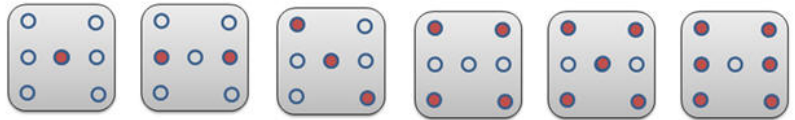
Dice presentations

Blockdiagram with a six as result
Example of how two leads are controlled by one output

Fill out the truth table after your own choices:

1) Should it be active high/low which turn on the LEDs
2) Should the count sequence be 0..5 or 1..6
3) Should the two remaining combinations => Don't care

Find the reduced Boolean questions

A =

B =

C =

D =

Electronic Dice – Version 1b

Truthtable

$Q_2Q_1Q_0$	A	B	C	D
0 0 0				
0 0 1				
0 1 0				
0 1 1				
1 0 0				
1 0 1				
1 1 0				
1 1 1				

Dice presentations

Driver with Combinatorial Logic
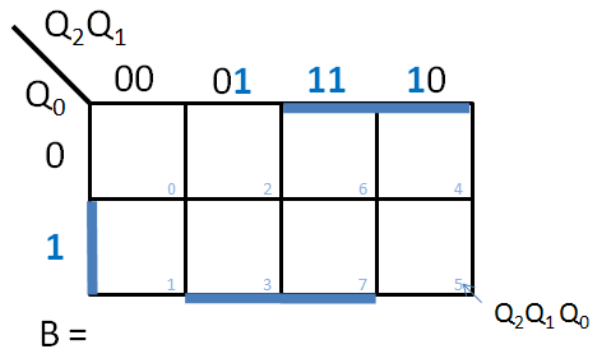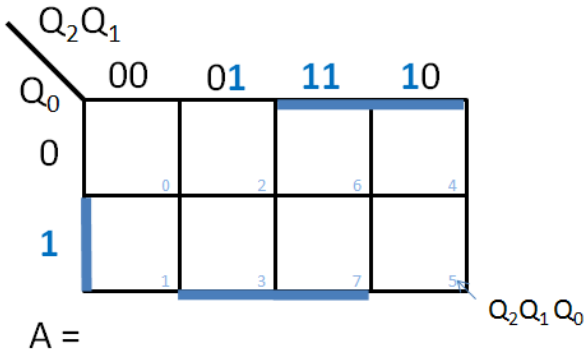
Q_2
Q_1
Q_0

A
B
C
D

Blockdiagram with a six as result
Example of how two leads are controlled by one output

Fill out the truth table after your own choices:

1) Should it be active high/low which turn on the LEDs
2) Should the count sequence be 0..5 or 1..6
3) Should the two remaining combinations => Don't care
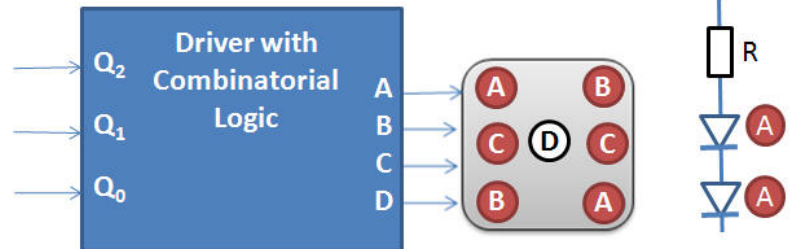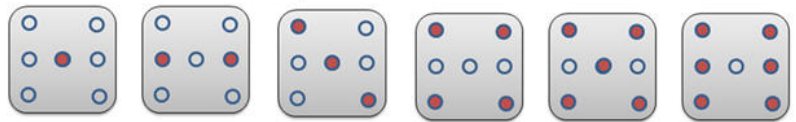
Find the reduced Boolean questions

Q_2Q_1

Q_0	00	01	11	10
0	0	2	6	4
1	1	3	7	5

$Q_2Q_1Q_0$

A =

Q_2Q_1

Q_0	00	01	11	10
0	0	2	6	4
1	1	3	7	5

$Q_2Q_1Q_0$

B =

Q_2Q_1

Q_0	00	01	11	10
0	0	2	6	4
1	1	3	7	5

$Q_2Q_1Q_0$

C =

Q_2Q_1

Q_0	00	01	11	10
0	0	2	6	4
1	1	3	7	5

$Q_2Q_1Q_0$

D =