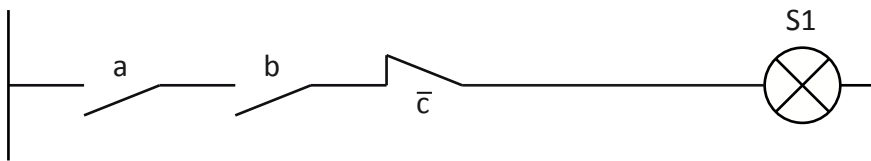


LOGIQUE COMBINATOIRE

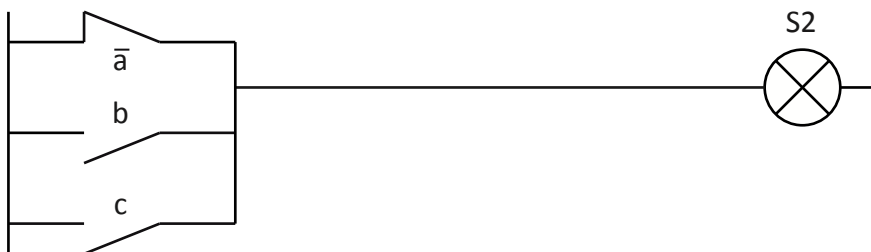
1. Schémas à contacts

- Donner les équations logiques des schémas à contacts ci-dessous.
- Compléter les tables de vérité fournies.



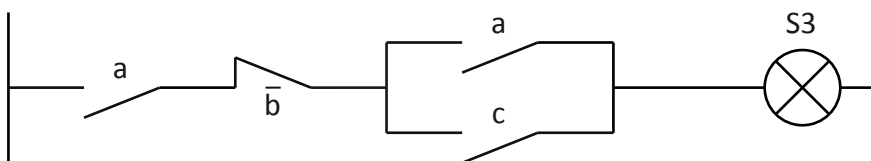
S1 =

a	b	c	S1
0	0	0	
0	0	1	
0	1	0	
0	1	1	
1	0	0	
1	0	1	
1	1	0	
1	1	1	



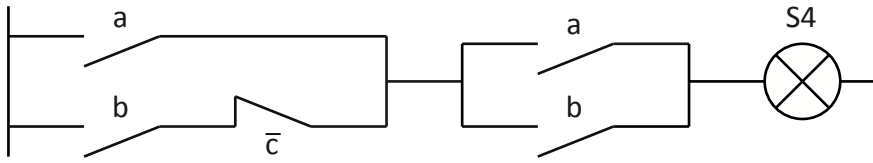
S2 =

a	b	c	S2
0	0	0	
0	0	1	
0	1	0	
0	1	1	
1	0	0	
1	0	1	
1	1	0	
1	1	1	



S3 =

a	b	c	S3
0	0	0	
0	0	1	
0	1	0	
0	1	1	
1	0	0	
1	0	1	
1	1	0	
1	1	1	



S4 =

a	b	c	S4
0	0	0	
0	0	1	
0	1	0	
0	1	1	
1	0	0	
1	0	1	
1	1	0	
1	1	1	

2. Logigrammes

- Tracer les logigrammes des équations logiques ci-dessous.
- Compléter les tables de vérité fournies.

$$S5 = (a + b) \cdot c$$

a	b	c	S5
0	0	0	
0	0	1	
0	1	0	
0	1	1	
1	0	0	
1	0	1	
1	1	0	
1	1	1	

$$S6 = \bar{a} + (b \cdot c)$$

a	b	c	S6
0	0	0	
0	0	1	
0	1	0	
0	1	1	
1	0	0	
1	0	1	
1	1	0	
1	1	1	

$$S7 = (a \cdot \bar{c}) + (b \cdot c)$$

a	b	c	S7
0	0	0	
0	0	1	
0	1	0	
0	1	1	
1	0	0	
1	0	1	
1	1	0	
1	1	1	

$$S8 = \overline{(a \cdot b)} + \overline{(b \cdot c)}$$

a	b	c	S8
0	0	0	
0	0	1	
0	1	0	
0	1	1	
1	0	0	
1	0	1	
1	1	0	
1	1	1	

3. Équations logiques

Simplifier les équations logiques ci-dessous.

$$S9 = (a \cdot b) \cdot (a + c)$$

.....

.....

.....

$$S10 = (a + a \cdot b) \cdot (a \cdot b + b)$$

.....

.....

.....

$$S11 = (a + \bar{a} \cdot b) \cdot (\bar{b} + a \cdot b)$$

.....

.....

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