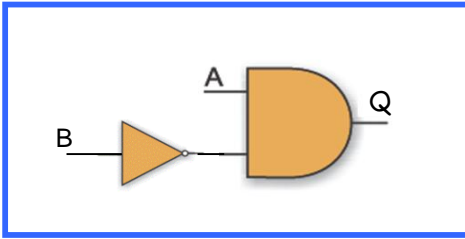


I. A partir de los circuitos digitales. Halla: a) La Tabla de verdad, b) Función lógica.

1



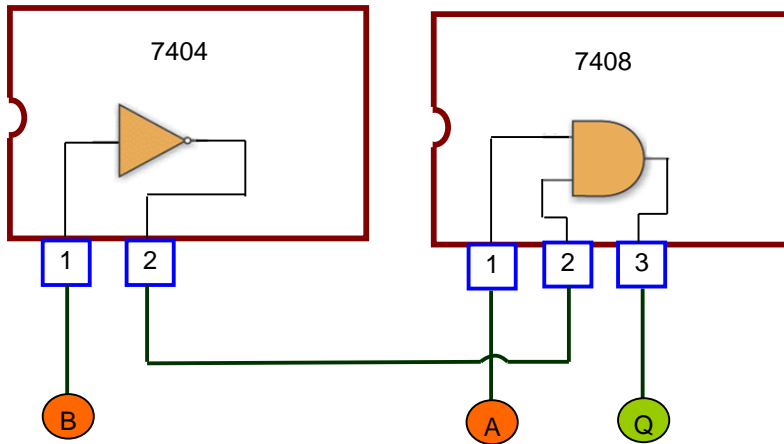
Función

$$Q = A \cdot \bar{B}$$

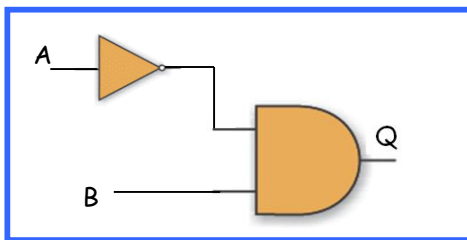
Tabla lógica

A	B	Q = A · \bar{B}		
0	0	0	0	1
0	1	0	0	0
1	0	1	1	1
1	1	0	1	0

Controlador digital



2



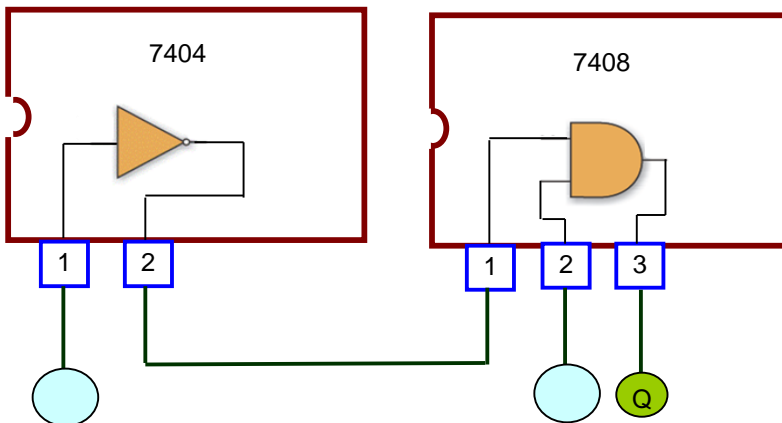
Función

$$Q =$$

Tabla lógica

A	B	Q =
0	0	
0	1	
1	0	
1	1	

Controlador digital

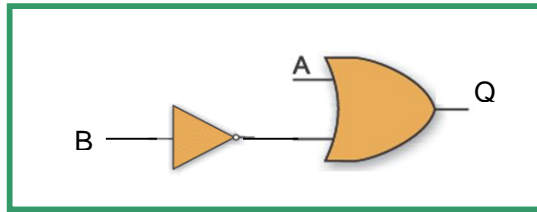


CUESTIONARIO

- Dada la función : $Q = A \cdot \bar{B}$ Hallar:
 - Diagrama de bloques.
 - Tabla de verdad.

I. A partir de los circuitos digitales. Halla: a) La Tabla de verdad, b) Circuito lógico, b) Función lógica.

1

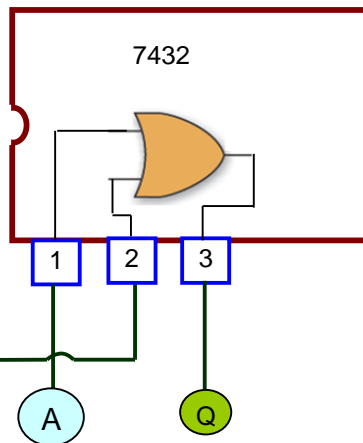
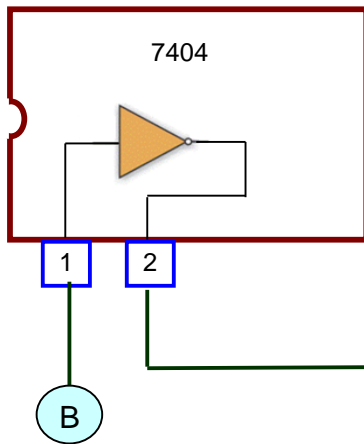


Función

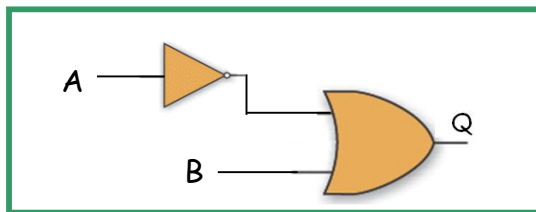
$$Q = A + \bar{B}$$

Tabla lógica

A	B	Q = A + \bar{B}	
0	0	1	0 1
0	1	0	0 0
1	0	1	1 1
1	1	1	1 0



2

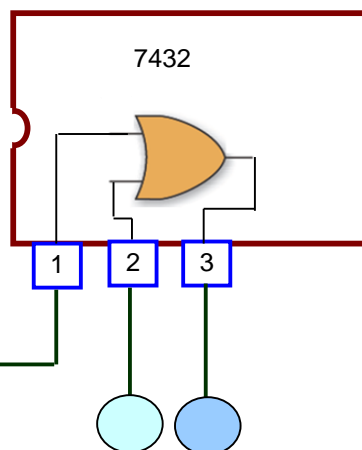
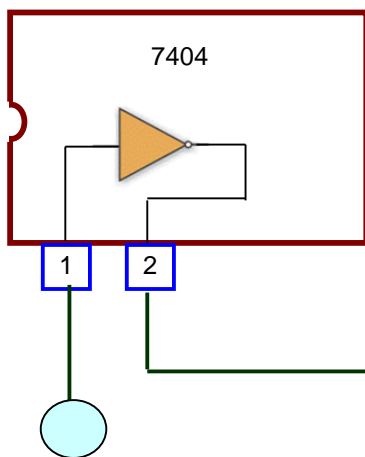


Función

$$Q =$$

Tabla lógica

A	B	Q =
0	0	
0	1	
1	0	
1	1	

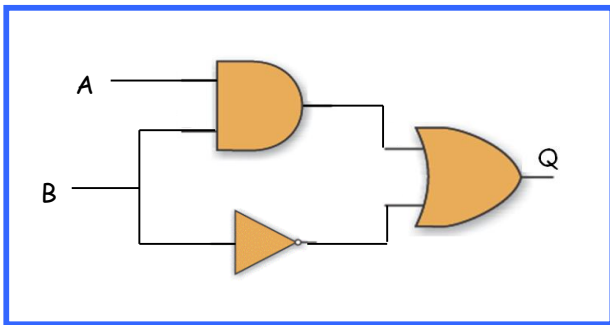


CUESTIONARIO

- Dada la función : $Q = A + \bar{B}$ Hallar:
 - Diagrama de bloques.
 - Tabla de verdad.

I. A partir de los circuitos digitales. Halla: a) La Tabla de verdad, b) Circuito lógico, b) Función lógica.

1

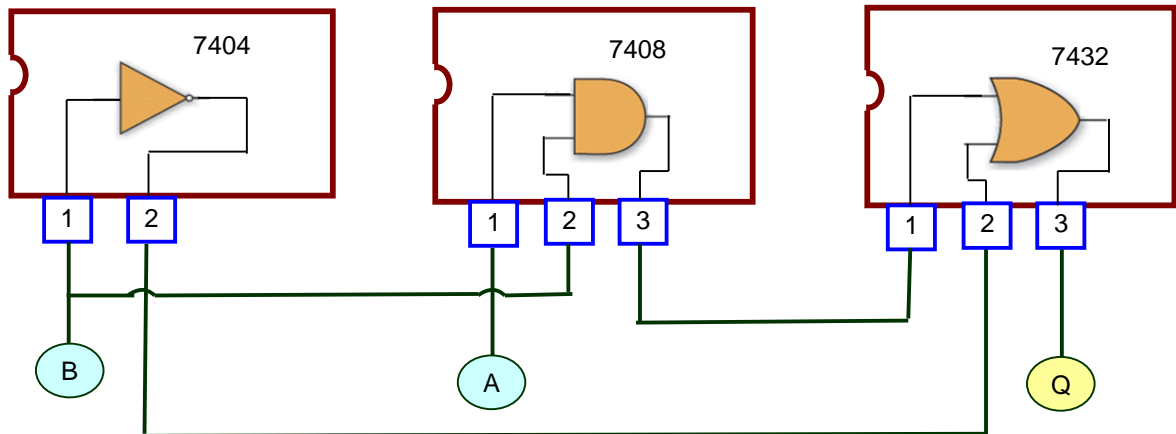


Función

$$Q = A \cdot B + \bar{B}$$

Tabla lógica

A	B	Q = A · B + \bar{B}
0	0	1
0	1	0
1	0	1
1	1	1



2

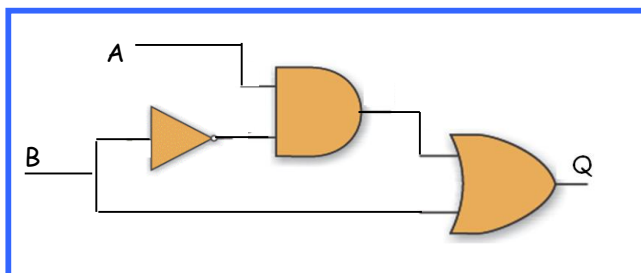
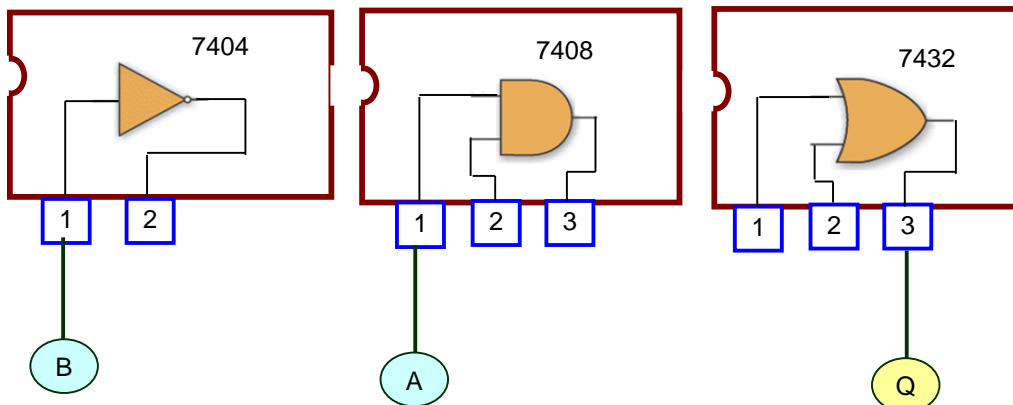


Tabla lógica

A	B	Q =
0	0	
0	1	
1	0	
1	1	

Función

$$Q =$$



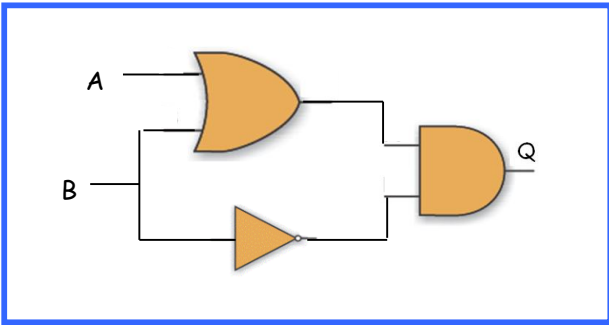
CUESTIONARIO

- Dada la función :

$$Q = \bar{A} \cdot B + A$$
 Hallar :
 a) Diagrama de bloques.
 b) Tabla de verdad.

A partir de los circuitos digitales. Halla: a) La Tabla de verdad, b) Circuito lógico, b) Función lógica.

1

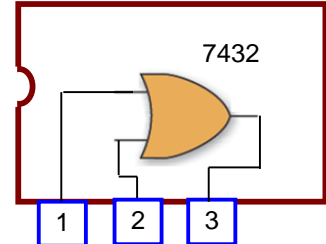
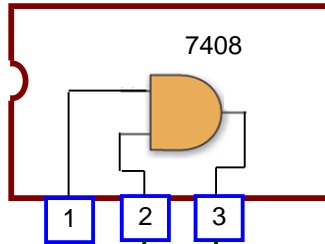
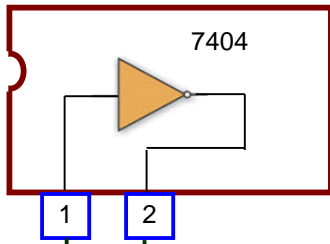


Función

$$Q = (A + B) \cdot \bar{B}$$

Tabla lógica

A	B	Q = (A + B) · \bar{B}			
0	0	0	0	0	1
0	1	0	0	1	0
1	0	1	1	0	1
1	1	0	1	1	0



2

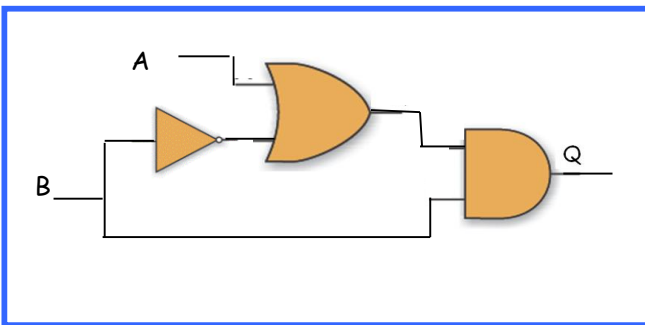
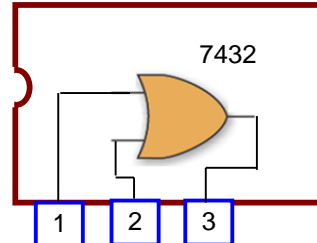
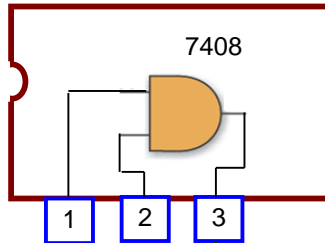
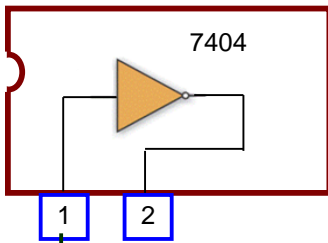


Tabla lógica

A	B	Q =			
0	0				
0	1				
1	0				
1	1				

Función

$$Q =$$



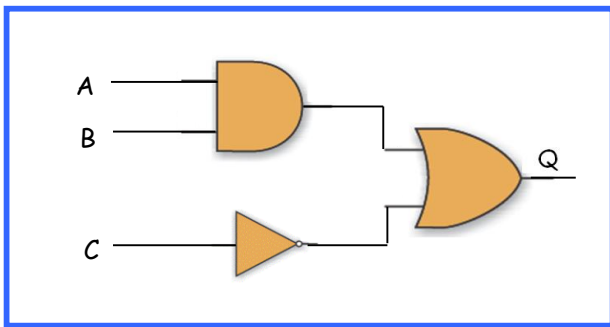
CUESTIONARIO

- Dada la función :

$$Q = (\bar{A} + B) \cdot A$$
 Hallar :
 a) Diagrama de bloques.
 b) Tabla de verdad.

A partir de los circuitos digitales. Halla: a) La Tabla de verdad, b) Circuito lógico, b) Función lógica.

1

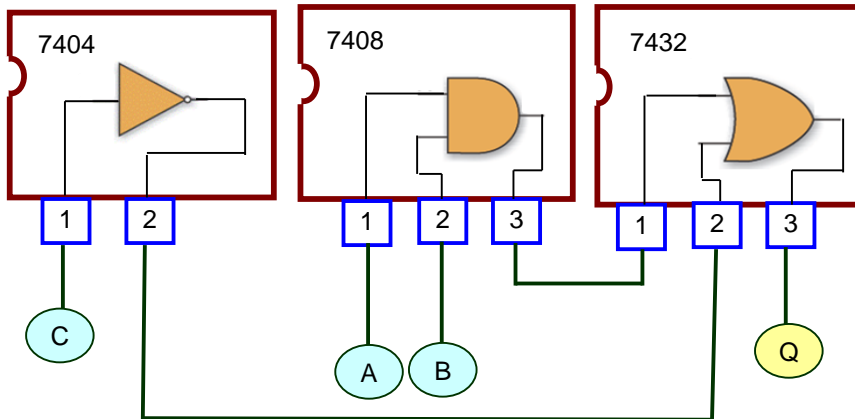


Función

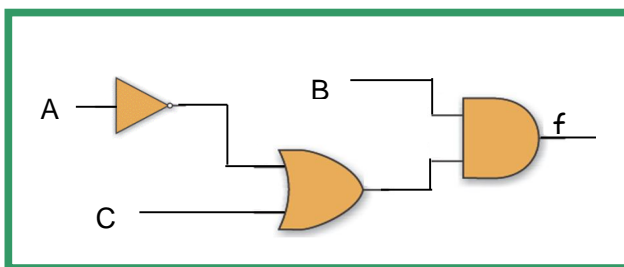
$$Q = A \cdot B + \bar{C}$$

Tabla lógica

A	B	C	Q = A · B + C̄			
0	0	0	1	0	0	1
0	0	1	0	0	0	0
0	1	0	1	0	0	1
0	1	1	0	0	1	0
1	0	0	1	1	0	1
1	0	1	0	1	0	0
1	1	0	1	1	1	1
1	1	1	1	1	1	0



2

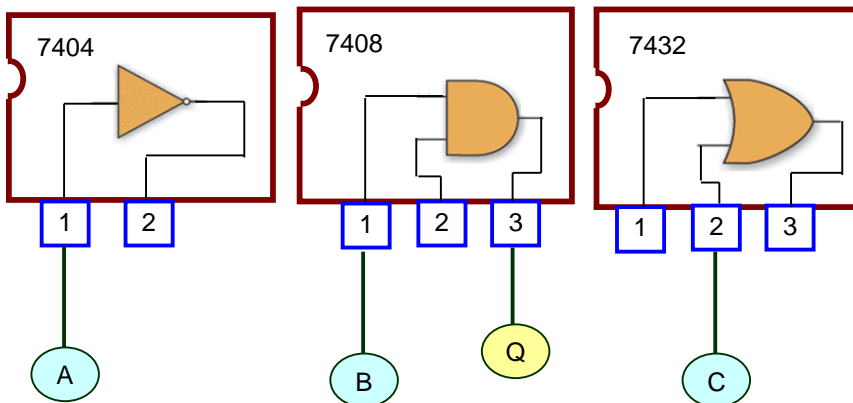


Función

$$Q =$$

Tabla lógica

A	B	C	Q =			
0	0	0				
0	0	1				
0	1	0				
0	1	1				
1	0	0				
1	0	1				
1	1	0				
1	1	1				



CUESTIONARIO

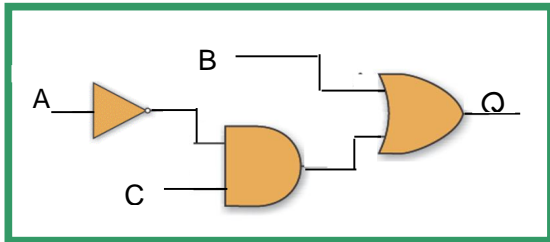
- Dada la función :

$$Q = (\bar{A} + C) \cdot \bar{B}$$
 Hallar :
 a) Diagrama de bloques.
 b) Tabla de verdad.

I. A partir de los circuitos digitales. Halla: a) La Tabla de verdad, b) Circuito lógico, b) Función lógica.

1

Diagrama de bloques

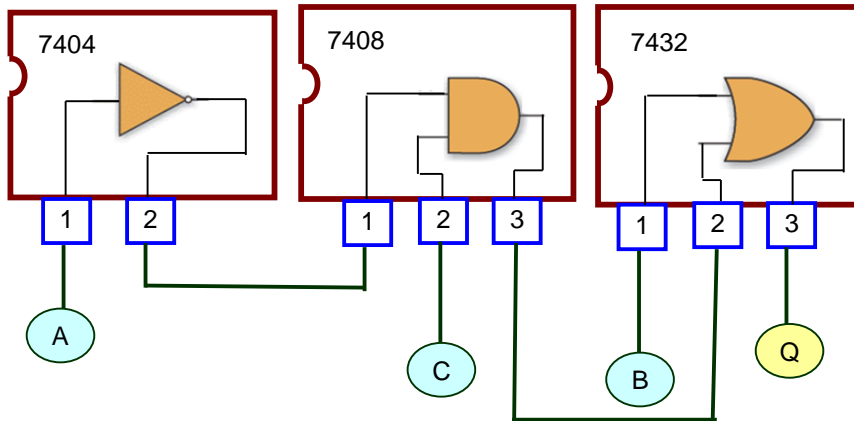


Función

$$Q = B + \bar{A} \cdot C$$

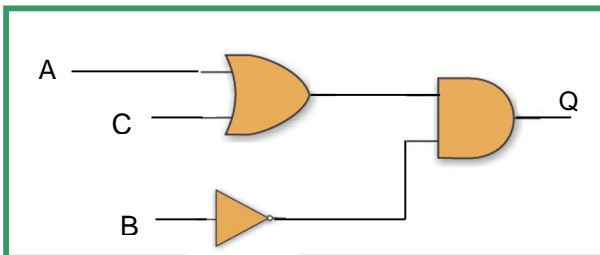
Tabla lógica

A	B	C	Q = B + $\bar{A} \cdot C$				
0	0	0	0	0	1	0	0
0	0	1	1	0	1	1	1
0	1	0	0	0	1	0	0
0	1	1	1	0	1	1	1
1	0	0	1	1	0	0	0
1	0	1	1	1	0	0	1
1	1	0	1	1	0	0	0
1	1	1	1	1	0	0	1



2

Diagrama de bloques

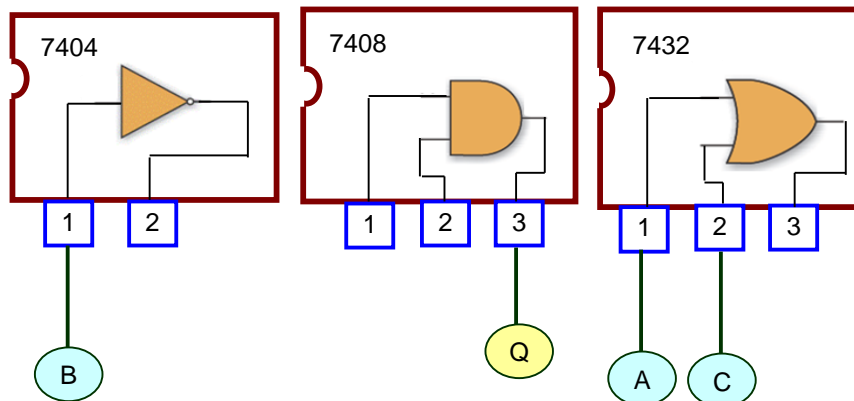


Función

$$Q =$$

Tabla lógica

A	B	C	Q =			
0	0	0				
0	0	1				
0	1	0				
0	1	1				
1	0	0				
1	0	1				
1	1	0				
1	1	1				



CUESTIONARIO

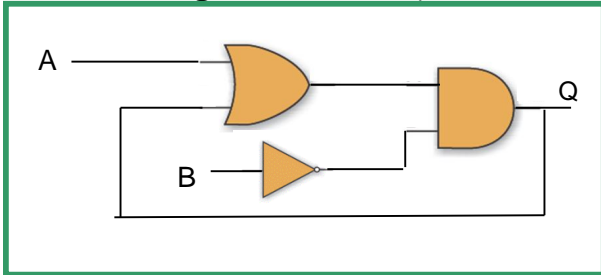
- Dada la función :

$$Q = \bar{C} + A \cdot \bar{B}$$
 Hallar :
 a) Diagrama de bloques.
 b) Tabla de verdad.

I. A partir de los circuitos digitales. Halla: a) La Tabla de verdad, b) Circuito lógico, b) Función lógica.

1

Diagrama de bloques

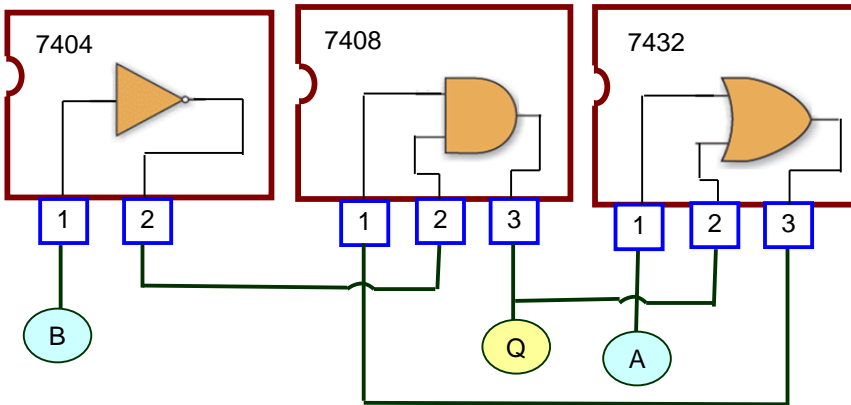


Función

$$Q = (A + Q) \cdot \bar{B}$$

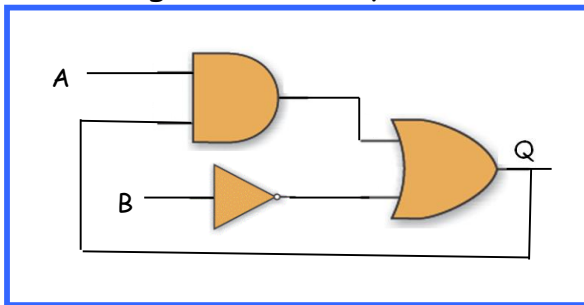
Tabla lógica

A	B	Q	Q = (A + Q) · B̄			
0	0	0	0	0	0	1
0	0	1	1	0	1	1
0	1	0	0	0	0	0
0	1	1	0	0	1	0
1	0	0	1	1	0	1
1	0	1	0	1	1	1
1	1	0	0	1	0	0
1	1	1	0	1	1	0



2

Diagrama de bloques

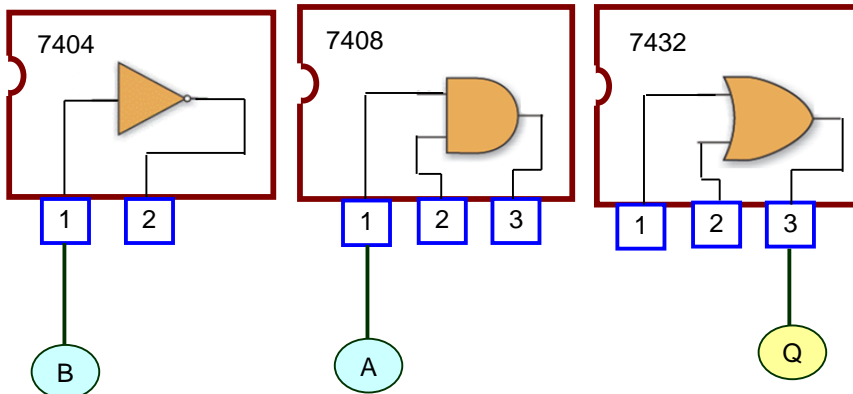


Función

$$Q =$$

Tabla lógica

A	B	C	Q =			
0	0	0				
0	0	1				
0	1	0				
0	1	1				
1	0	0				
1	0	1				
1	1	0				
1	1	1				



CUESTIONARIO

- Dada la función :
 $Q = \bar{A} \cdot B + Q$
 Hallar :
 a) Diagrama de bloques.
 b) Tabla de verdad.

I. A partir de la tabla de verdad. Halla: a) El mapa de Karnaugh b) Diagrama de bloques b) Función lógica.

1 Tabla lógica

A	B	C	Q
0	0	0	1
0	0	1	0
0	1	0	1
0	1	1	0
1	0	0	1
1	0	1	1
1	1	0	1
1	1	1	0

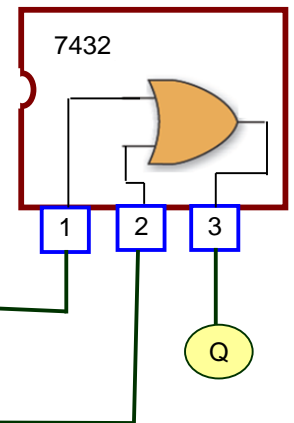
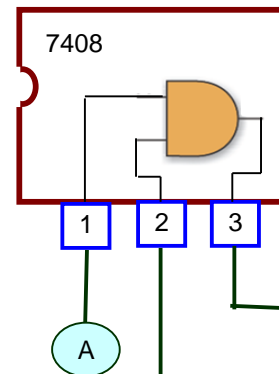
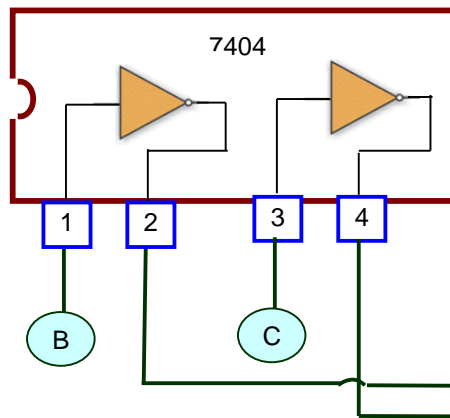
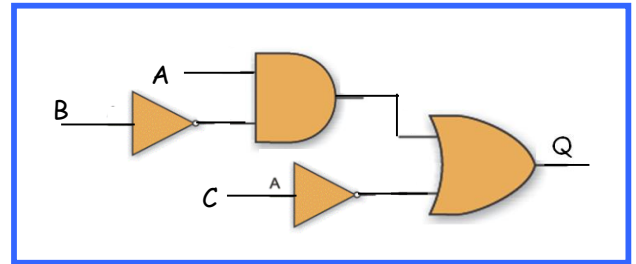
Mapa de Karnaugh

AB	00	01	11	10
0	1	1	1	1
1	0	0	0	1

Función

$$Q = A \cdot \bar{B} + C$$

Diagrama de bloques



2 Tabla lógica

A	B	C	Q
0	0	0	1
0	0	1	1
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	1
1	1	0	0
1	1	1	1

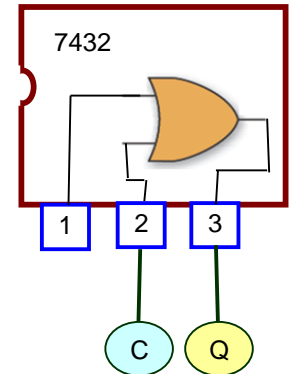
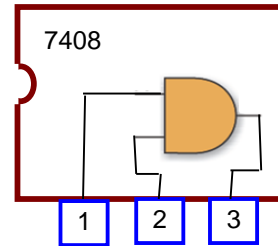
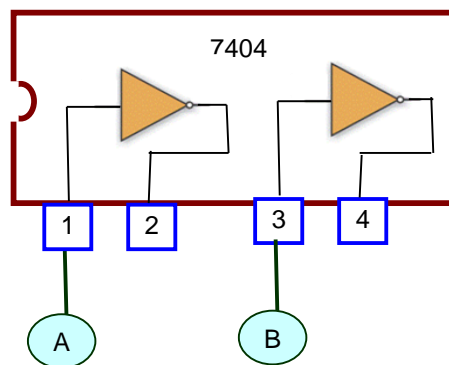
Mapa de Karnaugh

AB	00	01	11	10
0	1	0	0	0
1	1	1	1	1

Función

$$Q = \bar{A} \cdot \bar{B} + C$$

Diagrama de bloques



CUESTIONARIO

1. Dada la función :
 $Q = \bar{B} + A \cdot \bar{C}$

Hallar :

- Diagrama de bloques.
- Mapa de Karnaugh.

PRÁCTICA 9

CIRCUITOS DIGITALES

MAPAS DE KARNAUGH TRES VARIABLES

I. A partir de lo tabla de verdad. Halla: a) El mapa de Karnaugh b) Diagrama de bloques b) Fución lógica.

1 Tabla lógica

A	B	C	Q
0	0	0	1
0	0	1	0
0	1	0	1
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	1
1	1	1	1

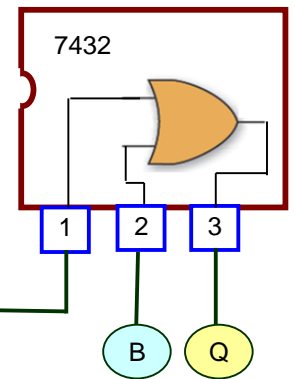
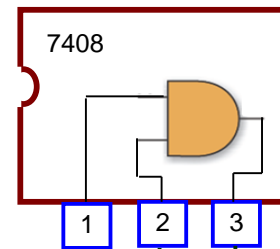
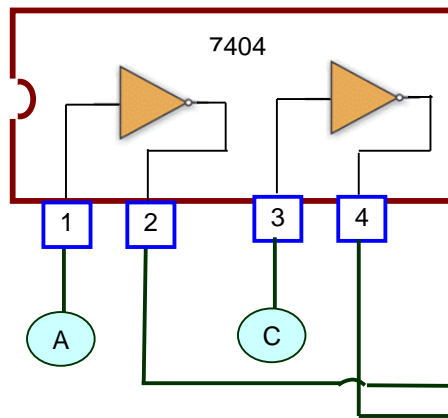
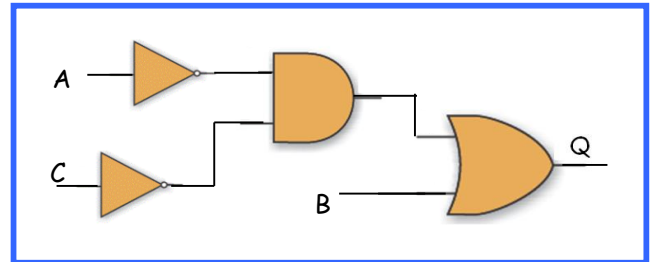
Mapa de Karnaugh

AB	00	01	11	10
0	1	1	1	0
1	0	1	1	0

Función

$$Q = \bar{A} \cdot \bar{C} + B$$

Diagrama de bloques



2 Tabla lógica

A	B	C	Q
0	0	0	1
0	0	1	1
0	1	0	1
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	1
1	1	1	0

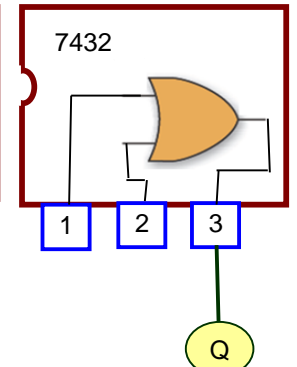
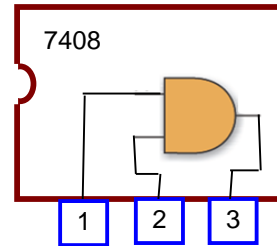
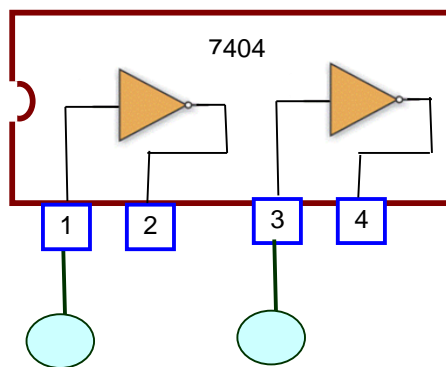
Mapa de Karnaugh

AB	00	01	11	10
0	1	1	1	0
1	1	1	0	0

Función

$$Q =$$

Diagrama de bloques



CUESTIONARIO

1. Dada el mapa de Kt.

AB	00	01	11	10
0	1	1	0	0
1	1	1	0	1

Hallar : a) Tabla lógica,
b) Función lógica.
c) Diagrama de bloques.

I. A partir de lo tabla de verdad. Halla: a) El mapa de Karnaugh b) Diagrama de bloques b) Fución lógica.

1 Tabla lógica

A	B	C	Q
0	0	0	0
0	0	1	0
0	1	0	1
0	1	1	1
1	0	0	0
1	0	1	1
1	1	0	0
1	1	1	1

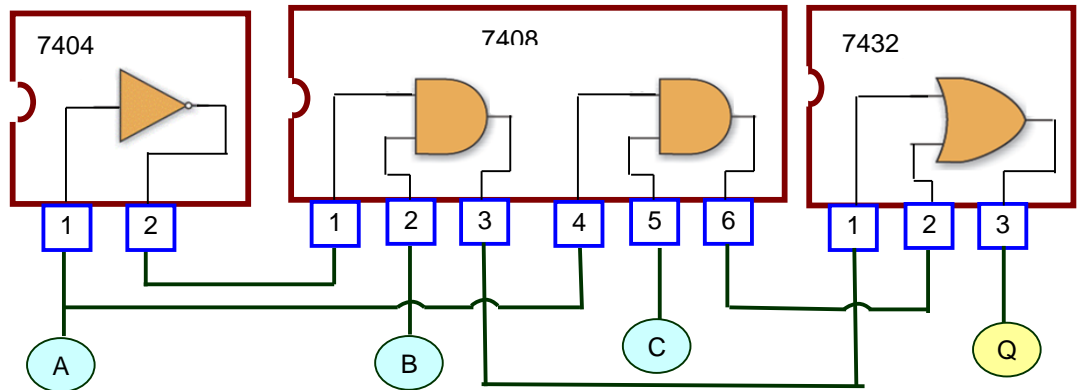
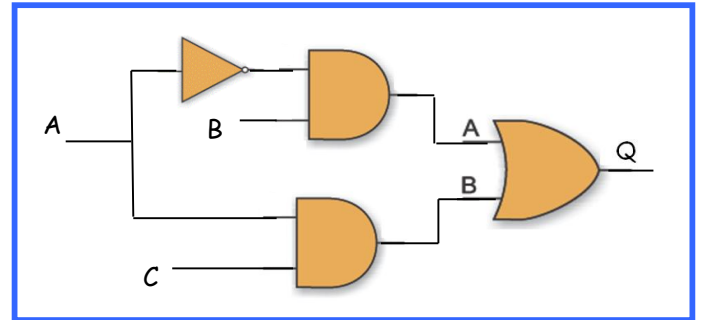
Mapa de Karnaugh

AB	00	01	11	10
C 0	0	1	0	0
1	0	1	1	1

Función

$$Q = \bar{A} \cdot B + A \cdot C$$

Diagrama de bloques



2 Tabla lógica

A	B	C	Q
0	0	0	0
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	1
1	0	1	0
1	1	0	1
1	1	1	1

Mapa de Karnaugh

AB	00	01	11	10
C 0	0	0	1	1
1	0	1	1	0

Función

$$Q =$$

Diagrama de bloques

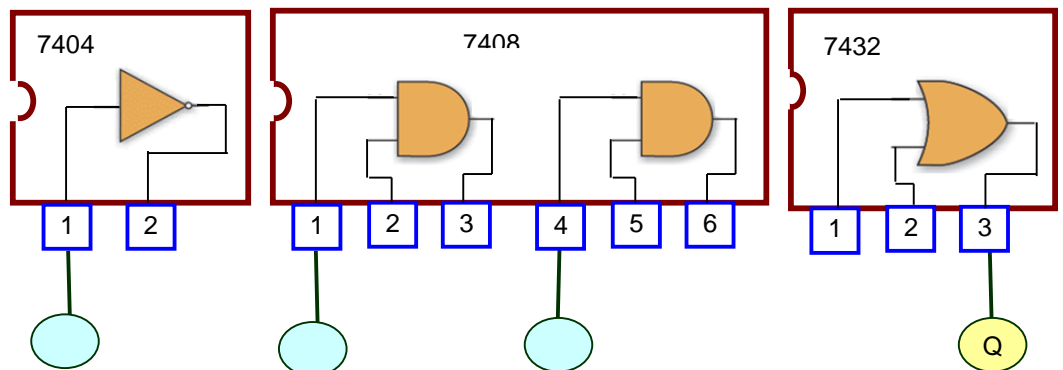


CUESTIONARIO

1. Dada el mapa de Kt.

AB	00	01	11	10
C 0	0	0	0	1
1	1	1	0	1

Hallar : a) Tabla lógica,
b) Función lógica.
c) Diagrama de bloques.



PRÁCTICA 11

CIRCUITOS DIGITALES TRES VARIABLES

ROBÓTICA

I. A partir del diagrama de bloques. Halla: a) El mapa de Karnaugh b) Tabla lógica c) Función lógica.

1 Diagrama de bloques

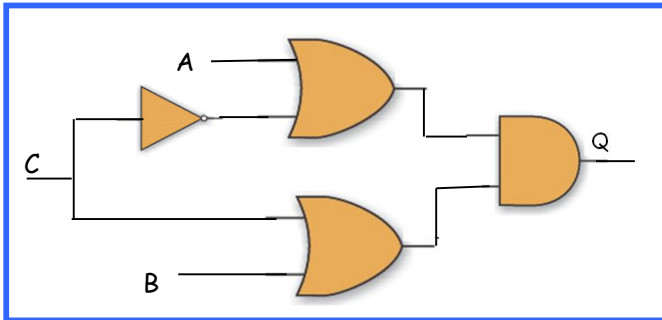
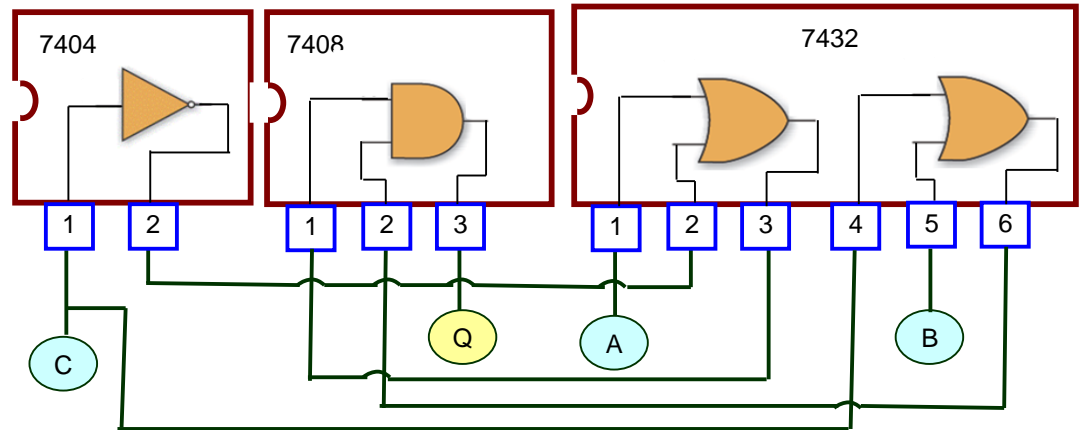


Tabla lógica

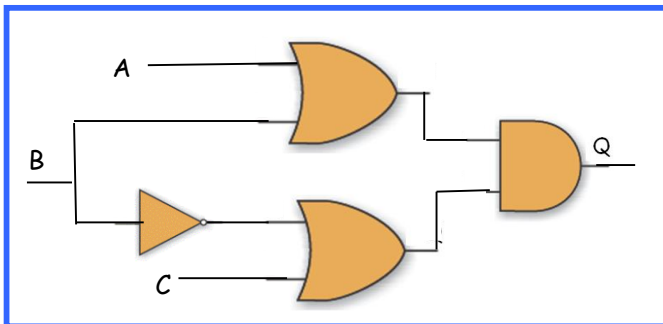
A	B	Q	$Q = (A + \bar{C}) \cdot (C + B)$						
0	0	0	0	1	1	0	0	0	
0	0	1	0	0	0	1	1	0	
0	1	0	1	0	1	1	0	1	
0	1	1	0	0	0	0	1	1	
1	0	0	0	1	1	1	0	0	
1	0	1	1	1	0	1	1	0	
1	1	0	1	1	1	0	1	1	
1	1	1	1	1	0	1	1	1	

Función

$$Q = (A + \bar{C}) \cdot (C + B)$$



2



A	B	Q	Q =						
0	0	0							
0	0	1							
0	1	0							
0	1	1							
1	0	0							
1	0	1							
1	1	0							
1	1	1							

Función

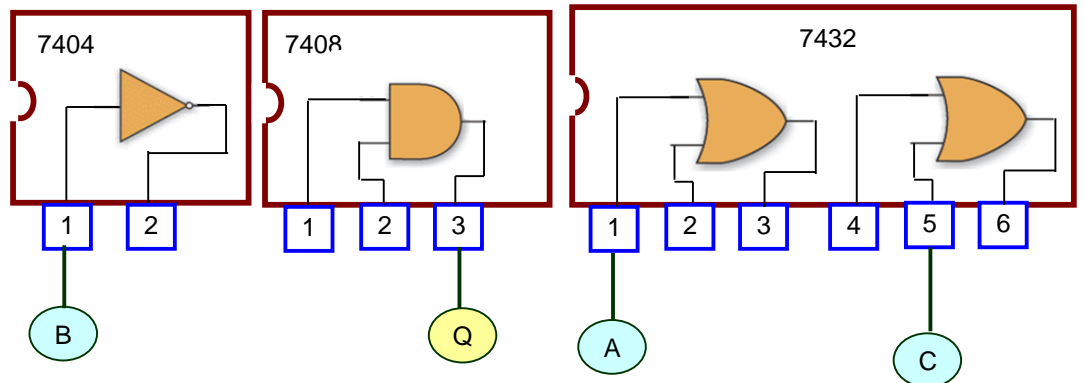
$$Q =$$

CUESTIONARIO

1. Dada la función :
 $Q = A \cdot (B + C) + B$

Hallar :

- Diagrama de bloques.
- Tabla de verdad.



I. A partir del diagrama de bloques. Halla: a) El mapa de Karnaugh b) Tabla lógica c) Función lógica.

1 Diagrama de bloques

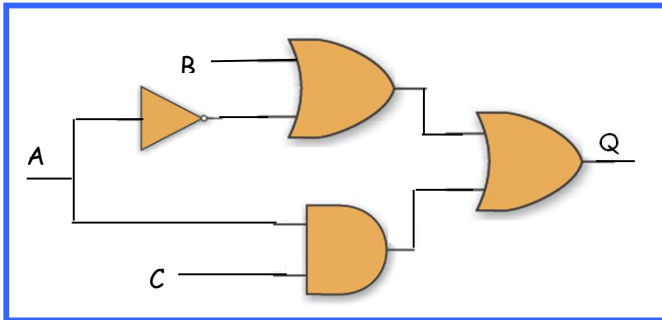
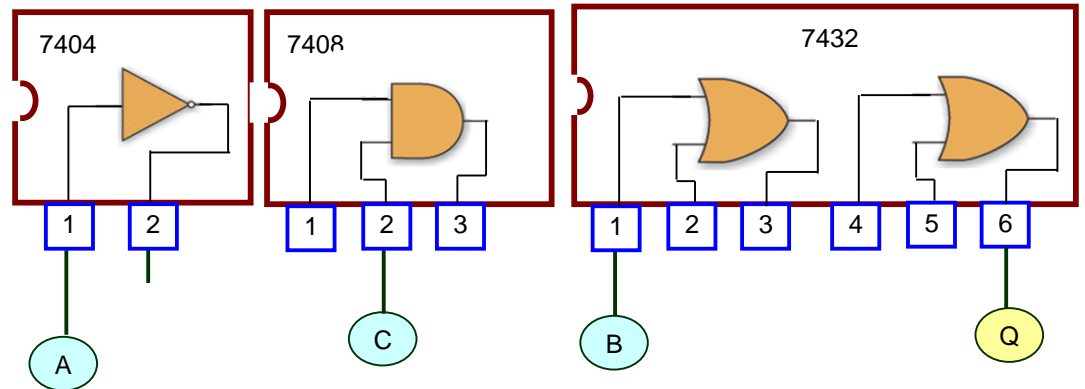


Tabla lógica

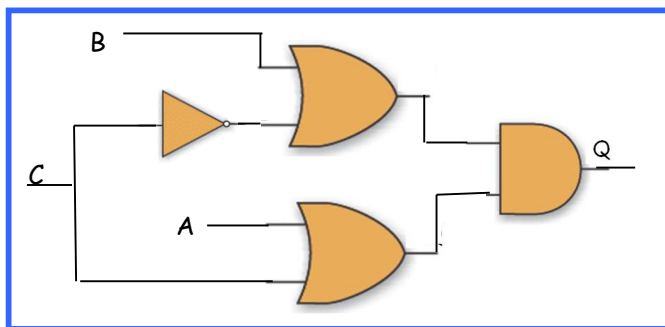
A	B	Q	$Q = (B + \bar{A}) + A \cdot C$					
0	0	0	1	0	1	1	0	0
0	0	1	1	0	1	1	0	1
0	1	0	1	1	1	1	0	0
0	1	1	1	1	1	1	0	1
1	0	0	0	0	0	0	1	0
1	0	1	1	0	0	0	1	1
1	1	0	1	1	1	0	1	0
1	1	1	1	1	1	0	1	1

Función

$$Q = (B + \bar{A}) + A \cdot C$$



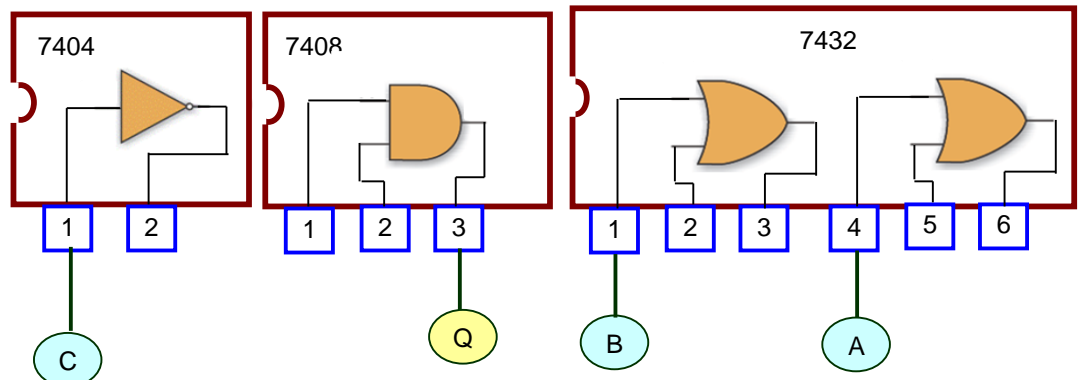
2



A	B	Q	Q =					
0	0	0						
0	0	1						
0	1	0						
0	1	1						
1	0	0						
1	0	1						
1	1	0						
1	1	1						

Función

$$Q =$$



CUESTIONARIO

1. Dada la función :
 $Q = (B \cdot C + \bar{A}) \cdot C$

Hallar :

- Diagrama de bloques.
- Tabla de verdad.

