



## Reduktionsopgaver

Reducer følgende udtryk:

#1:

$$F1 = \overline{(AB + C)} \cdot A$$

$$F2 = \overline{(A + B)} \cdot BC$$

$$F3 = \overline{A + \overline{BC}}$$

$$F4 = \overline{\overline{A + B} \cdot C}$$

Reducer flg. ligninger:

#2:

$$F5 = AB + \overline{AB}$$

$$F6 = \overline{ABC} + B$$

$$F8 = A + C + C$$

#3:

$$F4 = AC + \overline{AC} + AB + \overline{ABC} + \overline{ACD} + \overline{ABD}$$

$$F5 = \overline{\overline{ABC} + \overline{ABC}}$$

$$F6 = AC + \overline{AD} + \overline{\overline{AD}}$$

$$F7 = \overline{\overline{A} \cdot \overline{B}} \cdot \overline{\overline{C} \cdot \overline{D}}$$

$$F8 = \overline{\overline{ACD}} + \overline{\overline{A}} + \overline{\overline{D}}$$

$$F9 = \overline{\overline{ACD} + \overline{B} \cdot \overline{C}}$$

$$F10 = \overline{A} \cdot \overline{B} + \overline{A} \cdot \overline{B} \cdot C + \overline{A} \cdot \overline{B} + \overline{ACB}$$

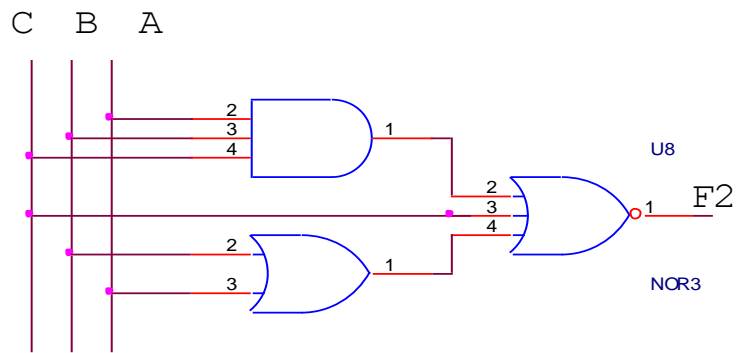
## Fra Diagram til ligning



#1:  
Opskriv det boolske udtryk.

Reducer

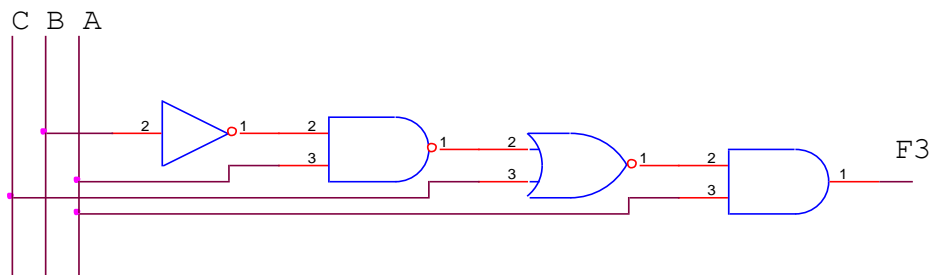
Tjek med sandhedsskema.



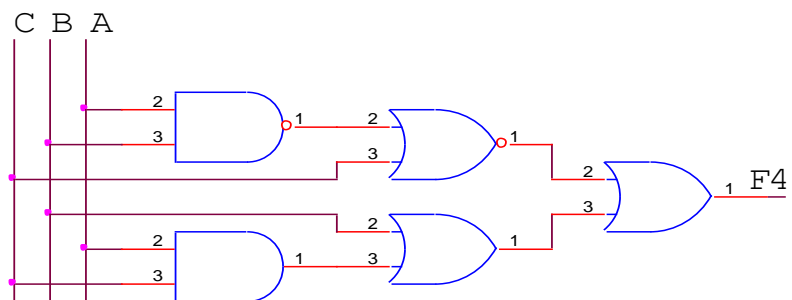
#2:  
Opskriv det boolske udtryk.

Reducer

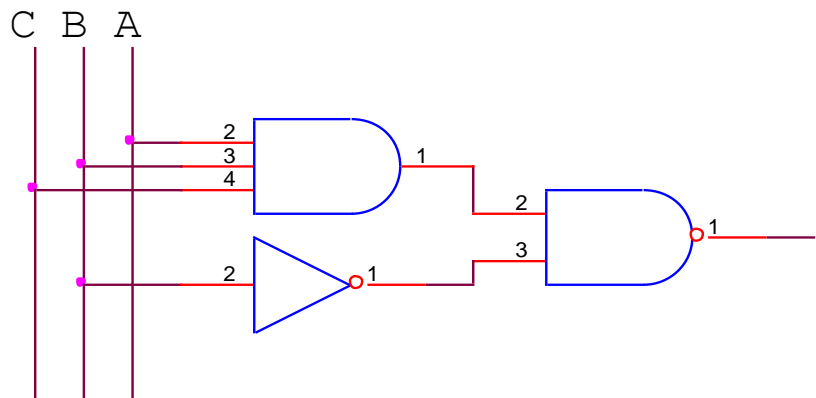
Tjek med sandhedsskema.



#3:  
Opskriv ligning



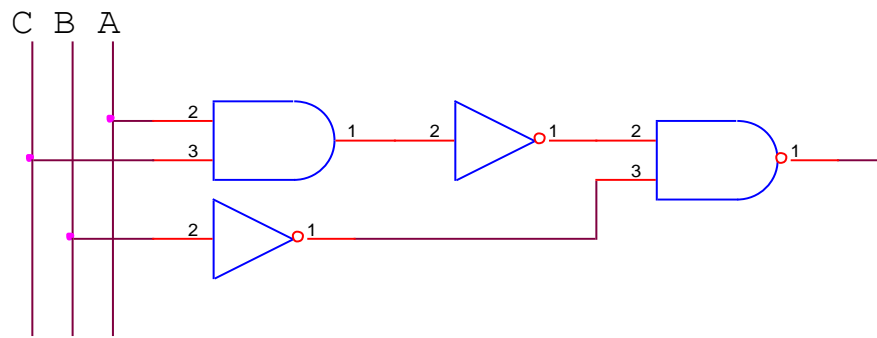
#4:  
Opskriv ligning





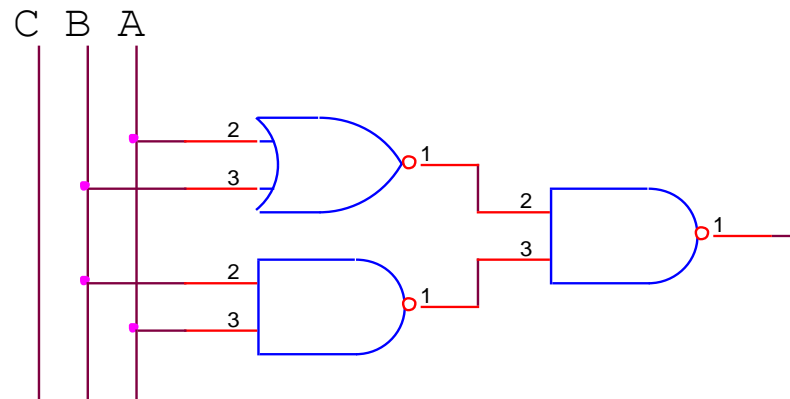
#5:

Opskriv ligning



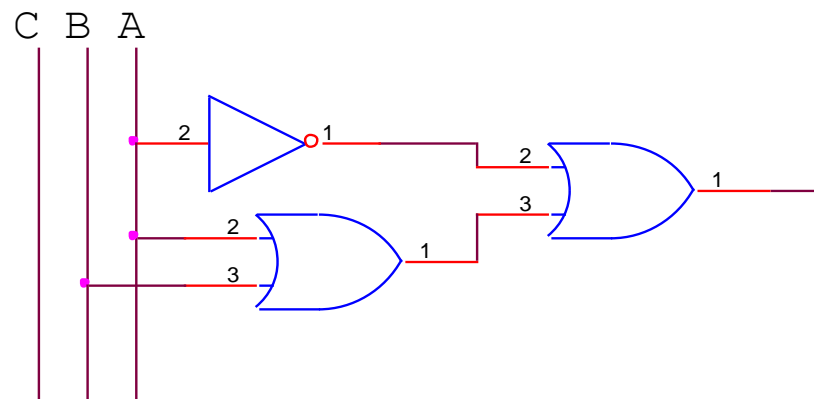
#6:

Opskriv ligning



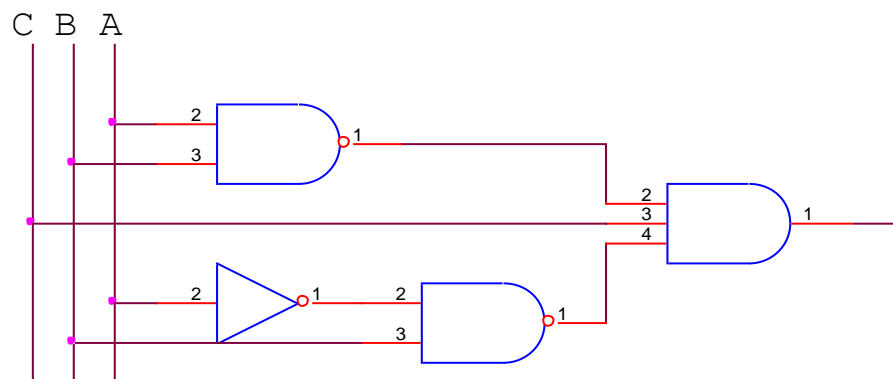
#7:

Opskriv ligning



#8:

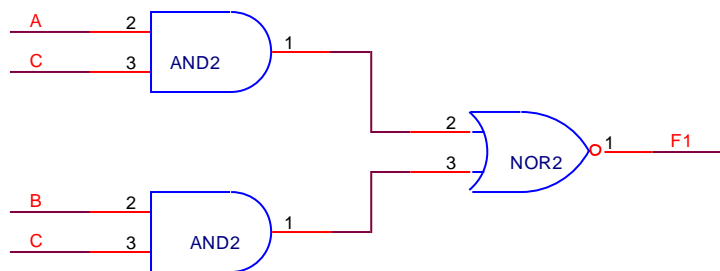
Opskriv ligning



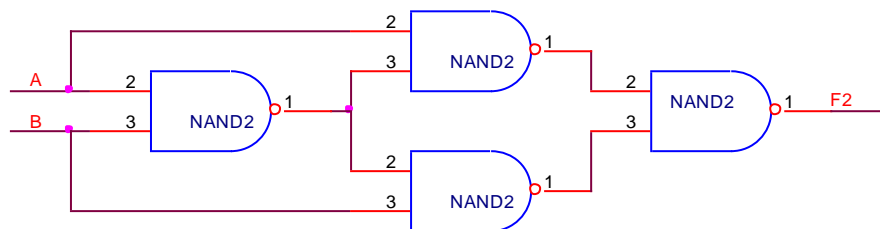
#9:



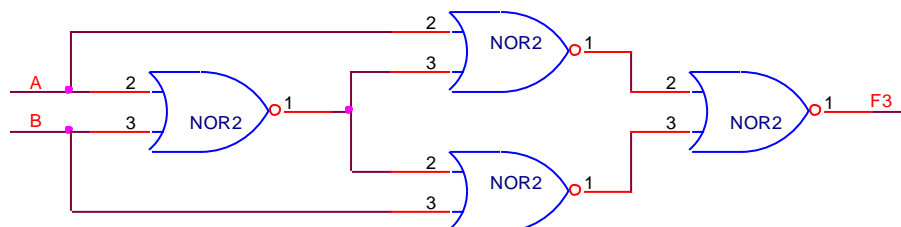
Find de boolske udtryk for kredsløbene.



#10:



#11:



## Fra Ligning til Diagram

Tegn kredsløbene: Reducer derefter, og tegn igen!

#9.1 - #9.5

$$\overline{\overline{A + B \cdot C}}$$

$$\overline{\overline{AC + B}}$$

$$\overline{\overline{AB + C}}$$

$$\overline{\overline{\overline{ABC}}}$$

$$\overline{AB + C}$$

#9.6 - #9.9

$$\overline{\overline{\overline{A \cdot B + C}}}$$

$$\overline{\overline{\overline{ABC}}}$$

$$\overline{\overline{ABC}}$$

$$\overline{A \cdot \overline{B} \cdot \overline{C}}$$



## **Fra sandhedsskema til ligning og diagram**

Mangler !!

## **Reduktion ved Karnaugh-kort**

Mangler !!