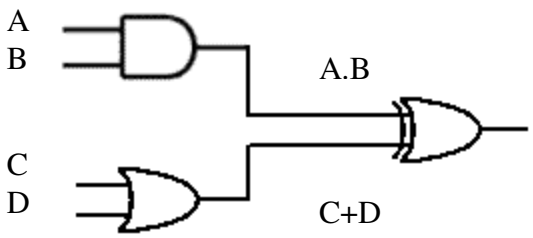
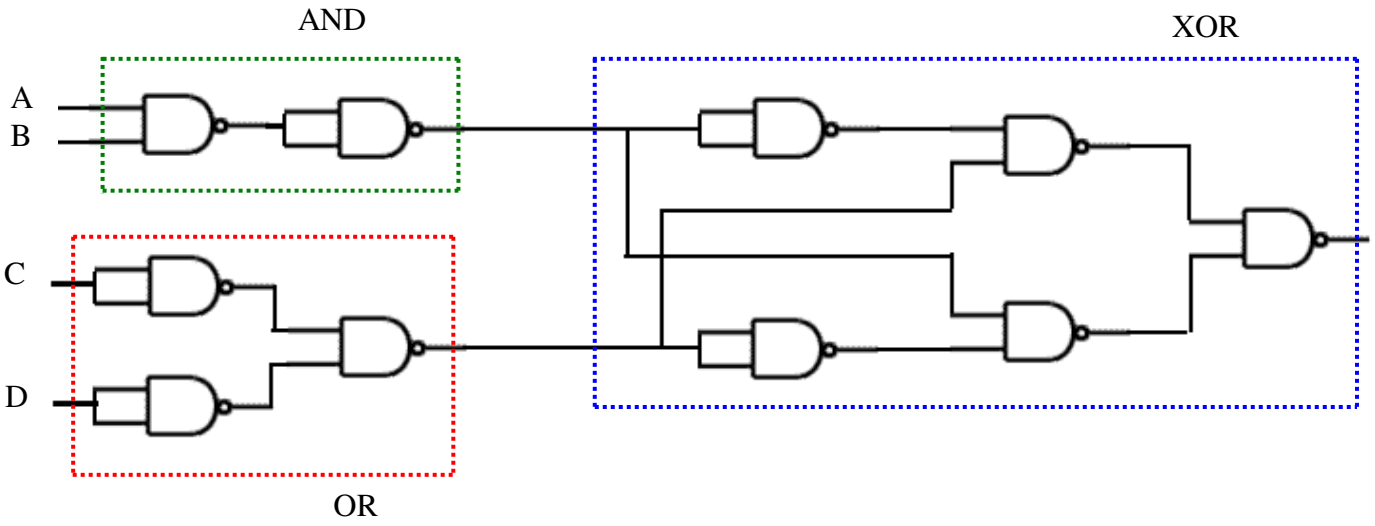
2) 2)



$F=A.B \oplus (C+D) = \overline{(A.B)}.(C+D) + (A.B).\overline{(C+D)}$

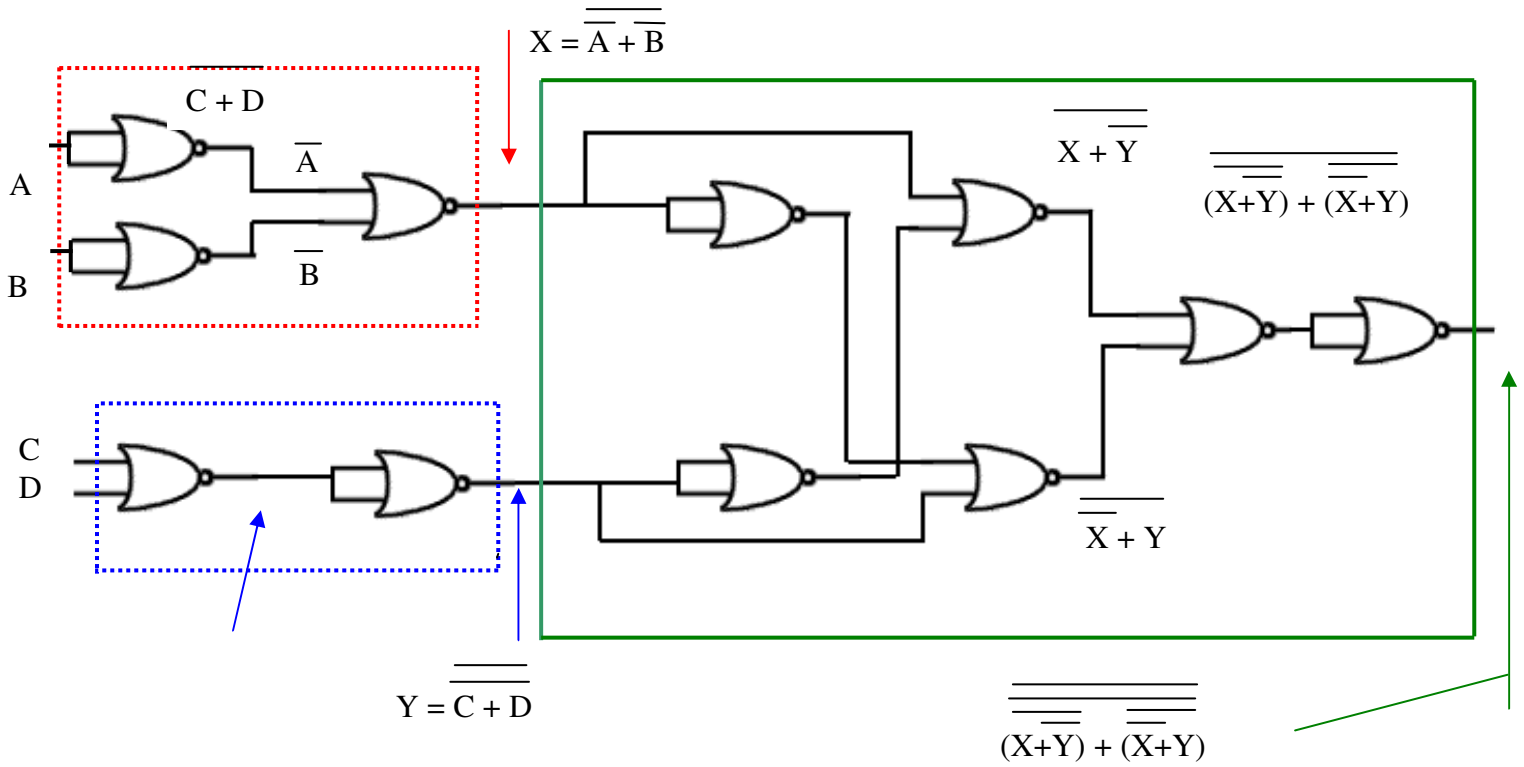
Sólo con Nand



$$F = \overline{(A.B)}.(C+D) + (A.B).\overline{(C+D)} = \overline{\overline{(A.B)}.(C+D)} + \overline{(A.B).\overline{(C+D)}} =$$

$$\overline{(A.B)}.(C \,.\, D) + (A.B).(C \,.\, D) = \overline{(A.B).(C \,.\, D)} \,.\, \overline{(A.B).(C \,.\, D)}$$

3) 2) Sólo con NOR



$$XOR = \overline{X} \cdot Y + X \cdot \overline{Y} = \overline{(X \cdot Y)} + \overline{(X \cdot \overline{Y})} = (\overline{X} + Y) + (X + \overline{Y}) =$$

$$(\overline{X} + Y) + (X + \overline{Y})$$