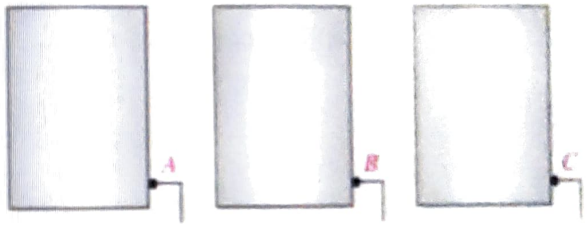
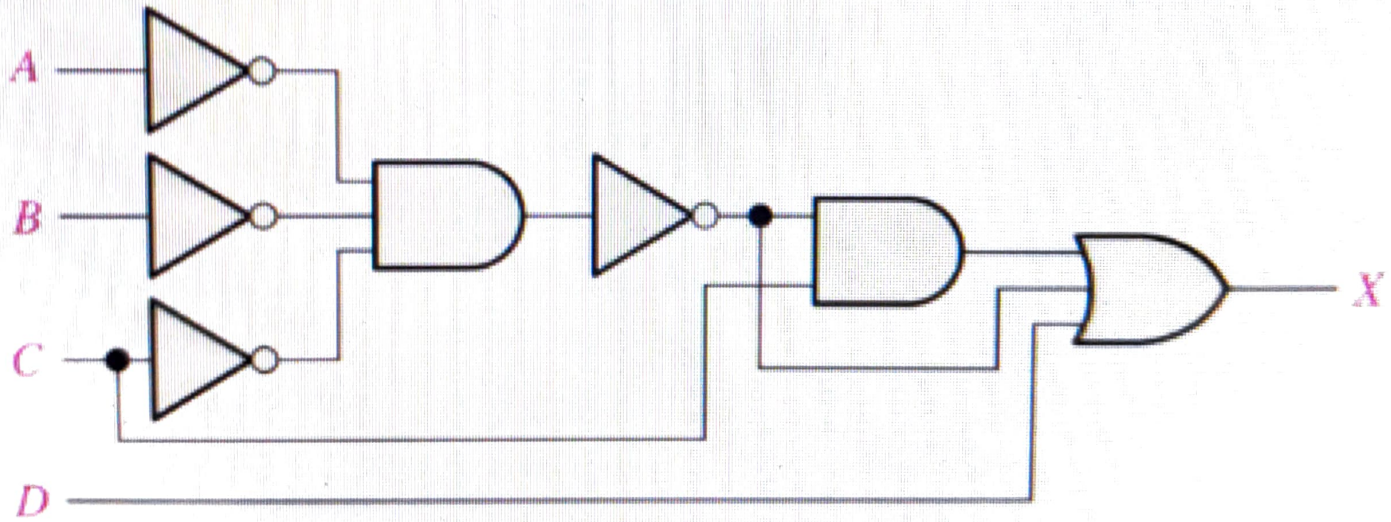
- In a chemical processing plant, chemicals are stored in three tanks. If the chemical level in any one of the tank goes low, it is detected by level sensor and an alarm is to be raised. Design a logic circuit to implement this function. Assume only two input AND gates are available. Other gates with multiple inputs are available.



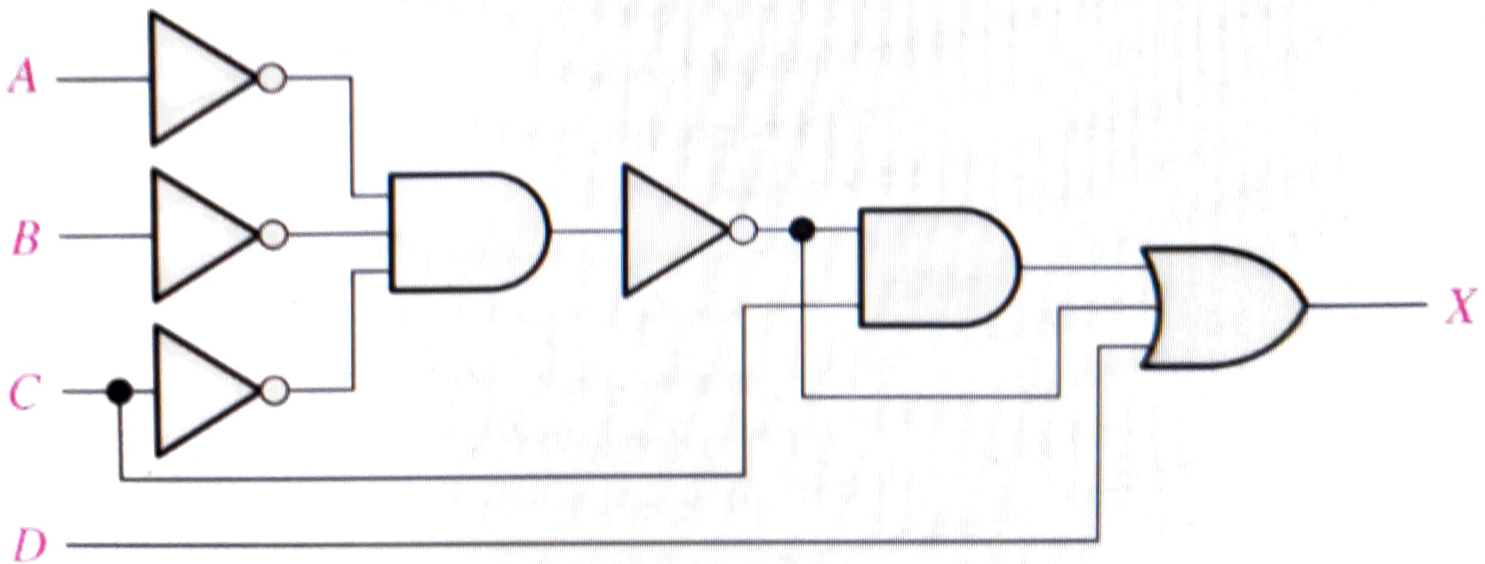
- Develop a logic circuit with four input variables that will produce a logic HIGH output when exactly three input variables are logic HIGH

Click to add title

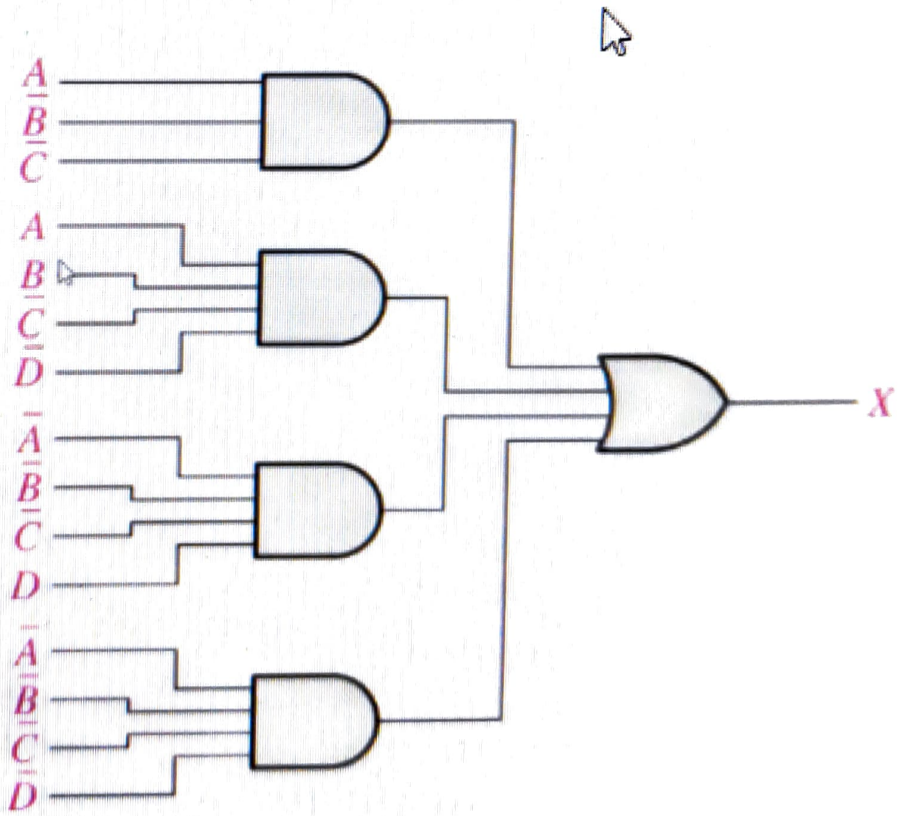
- Reduce the combinational circuit to a minimum form. Use any gate



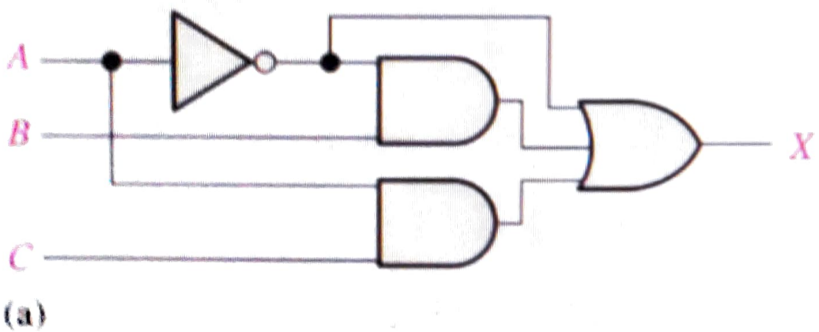
- Reduce the combinational circuit to a minimum form. Use any gate



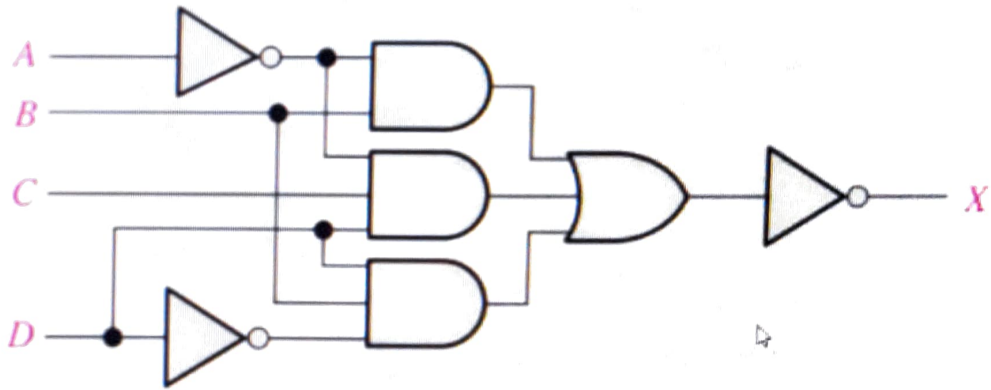
- Minimize the combinational logic circuit



- Write the output expression for each circuit in Figure



(a)



(b)

Implement logic circuits for the Truth tables

Inputs			Output
A	*B*	*C*	*X*
0	0	0	1
0	0	1	0
0	1	0	1
0	1	1	0
1	0	0	1
1	0	1	0
1	1	0	1
1	1	1	1

Inputs				Output
A	*B*	*C*	*D*	*X*
0	0	0	0	0
0	0	0	1	0
0	0	1	0	1
0	0	1	1	1
0	1	0	0	1
0	1	0	1	0
0	1	1	0	0
0	1	1	1	0
1	0	0	0	1
1	0	0	1	1
1	0	1	0	1
1	0	1	1	1
1	1	0	0	0
1	1	0	1	0
1	1	1	0	0
1	1	1	1	1