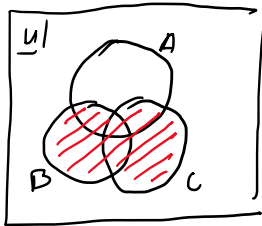


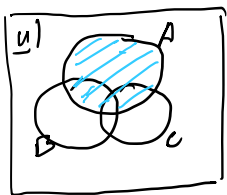
1. Buktikan:

a.  $A \cap (B \cup C) = (A \cap B) \cup (A \cap C)$

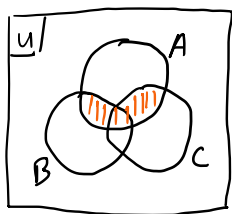
$B \cup C$ :



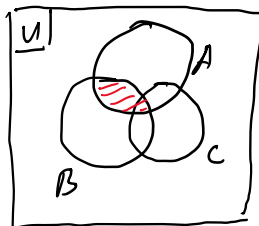
$A$ :



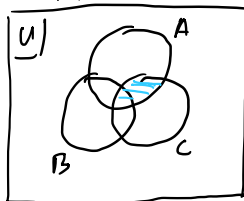
$A \cap (B \cup C)$ :



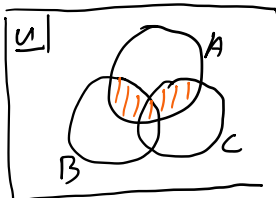
$A \cap B$ :



$A \cap C$ :

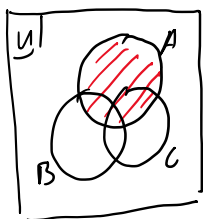


$(A \cap B) \cup (A \cap C)$ :

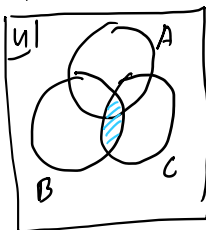


b.  $A \cup (B \cap C) = (A \cup B) \cap (A \cup C)$

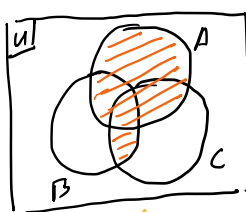
$A$ :



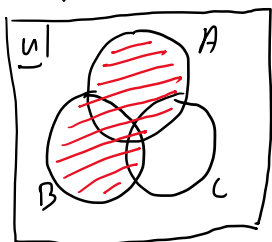
$B \cap C$ :



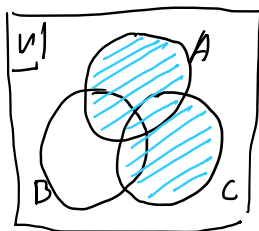
$A \cup (B \cap C)$ :



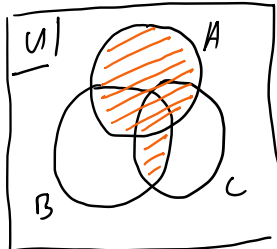
$A \cup B$ :



$A \cup C$ :

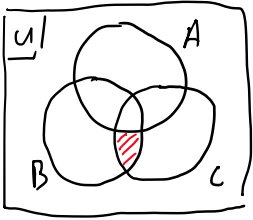


$(A \cup B) \cap (A \cup C)$ :

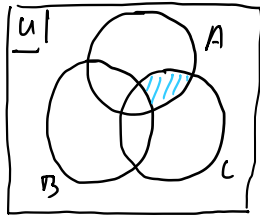


$$2. (\bar{A} \cap B \cap C) \cup (A \cap \bar{B} \cap C) \cup (A \cap B \cap \bar{C}) \cup (A \cap B \cap C)$$

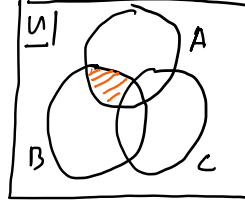
$\bar{A} \cap B \cap C$ :



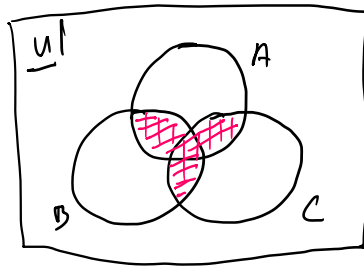
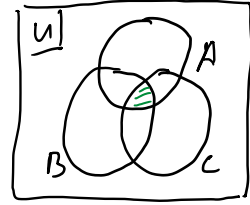
$A \cap \bar{B} \cap C$ :



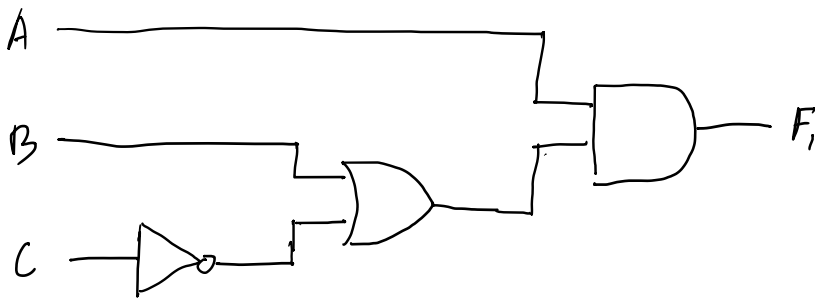
$A \cap B \cap \bar{C}$ :



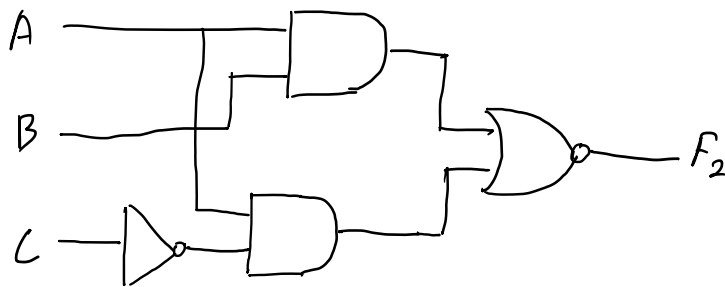
$A \cap B \cap C$ :



$$3. a. F_1 = A \cdot (B + \bar{C})$$



$$b. F_2 = A \cdot B + A \cdot \bar{C}$$



4. a.

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

b.

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