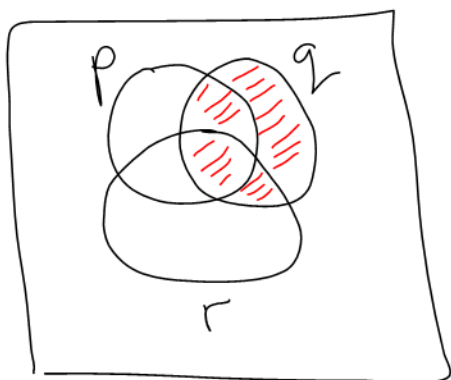
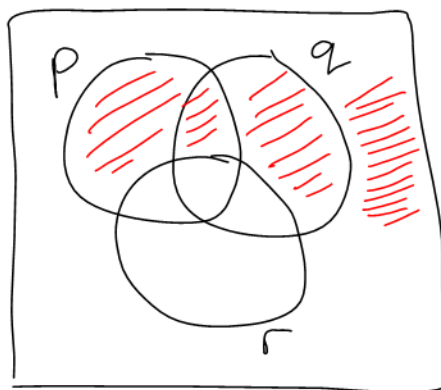


Omit #43-45 from Review

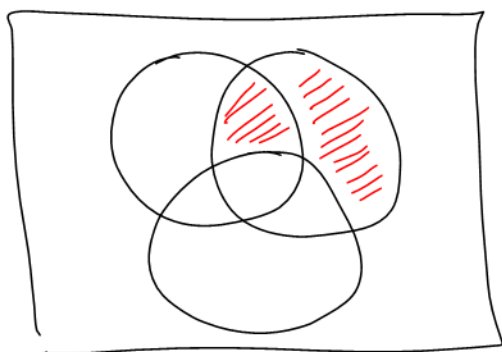
(12)



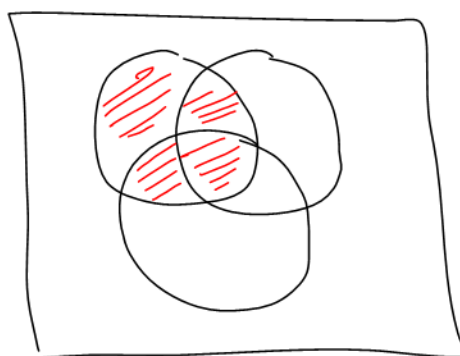
q



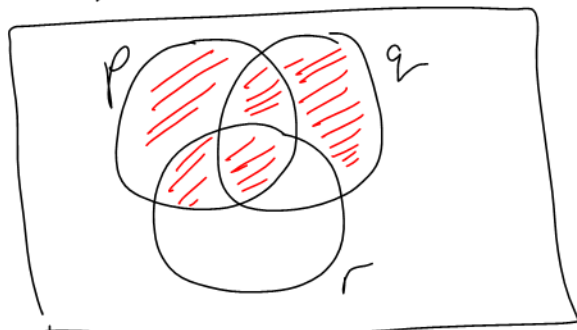
$\sim r$



$q \wedge \sim r$



p



$p \vee (q \wedge \sim r)$

14

$(p \wedge \sim q) \vee q \iff p \vee q$?

p	q	$\sim q$	$p \wedge \sim q$	$(p \wedge \sim q) \vee q$	$p \vee q$
0	0	1	0	0	0
0	1	0	0	1	1
1	0	1	1	1	1
1	1	0	0	1	1

↑
 Identical?
 ↑

YES

18

$$(BA + \overline{CBCB}) + \overline{\overline{AB}}$$

$$= (BA + 0) + \overline{\overline{AB}} \quad \text{Complement}$$

$$= BA + \overline{\overline{AB}} \quad \text{Identity}$$

$$= BA + AB \quad \text{Complement}$$

$$= AB + AB \quad \text{Commutative}$$

$$= AB \quad \text{Idempotent}$$

19

$$\sim(p \vee q) \wedge (q \vee (q \wedge \sim r))$$

\Leftrightarrow

$$\sim(p \vee q) \wedge q$$

Absorption

\Leftrightarrow

$$(\sim p \wedge \sim q) \wedge q$$

De Morgan's

\Leftrightarrow

$$\sim p \wedge (\sim q \wedge q)$$

Associative

\Leftrightarrow

$$\sim p \wedge 0$$

Complement

\Leftrightarrow

$$0$$

Identity