

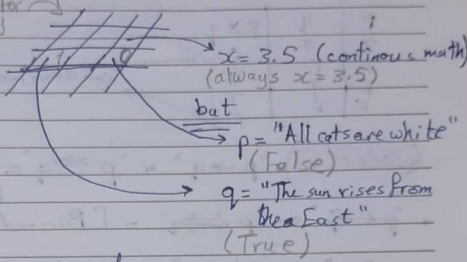
DISCRETE MATH

الرياضيات
المتقطعة

* الفرق بين التتبع في كوابل هائلة عدد وكوابل هائلة
كوتراو كوترا
* الحرافك بترسوخ في التتبع من غير ان يمشي القلم لكن الحرافك يمشي
فوقه فقط

* We Will Use "Logical Variables" that can contain statements that can be True or False

Computer Memory



Chapter 1 Logical Form & Logical Equivalence

* Slide (6): $\underbrace{(\text{IF } x=2)}_p \text{ or } \underbrace{x=-2}_q, \text{ then } \underbrace{x^2=4}_r$

$\therefore \underbrace{(\text{IF } x^2 \neq 4)}_{\text{not } r}, \text{ then } \underbrace{x \neq 2}_{\text{not } p} \text{ and } \underbrace{x \neq -2}_{\text{not } q}$
(or is wrong)

* Slide (13): "NOT P" \Rightarrow Not P (Negation)

Truth Table For Operation Negation:

	P	$\neg P$
1 = T	T	F
0 = F	F	T

on key board to 2 riban

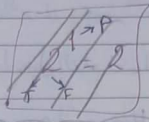
1 \Rightarrow P
2 = 2
T F

Disjunction Operation

"V" → OR Inclusive

Truth Table of operation "OR"

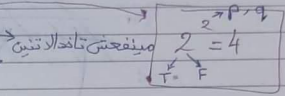
P	q	$P \vee q$
T	T	T
T	F	T
F	T	T
F	F	F



OR Exclusive " \vee " $(P \vee q) \wedge \neg(P \wedge q) = P \veebar q$

"p or q, but/and not p and q, electron 103 base"

P	q	$P \veebar q$
T	T	F
T	F	T
F	T	T
F	F	F



(Slide 15) " $p \rightarrow q$ " or " $p \Rightarrow q$ " = If p then q [Conditional]

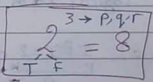
" $p \leftrightarrow q$ " or " $p \iff q$ " = [Biconditional]

* " \wedge " → AND "Conjunction Operation"

* Q: S = $(\neg P \wedge q) \vee r$

A:

P	q	r	$\neg P$	$(\neg P \wedge q)$	S
T	T	T	F	F	T
T	F	T	F	F	T
F	T	T	T	T	T
F	F	T	T	F	T
T	T	F	F	F	F
T	F	F	F	F	F
F	T	F	T	T	T
F	F	F	T	F	F



Next time "Logical Equivalence"