Foundation of Mathematics 1 Mustansiriyah University

College of Science Dept. of Math.

Dr. Bassam Al-Asadi and Dr. Emad Al-Zangana (2020-2021)





OR V	(Disjur	nction)
р	q	p V q
Т	Т	Т
Т	F	Т
F	Т	Т
F	F	F



Exclusive (\forall) one of p or q (read p or else q)

	⊻ (Exclusive)		
	р	q	p⊻q
	Т	Т	F
	Т	F	Т
80	F	Т	Т
	F	F	F

If \rightarrow Then Statements – These statements are false only when p is true and q is false (because anything can follow from a false premise).

Equivalent Forms of $(\mathbf{p} \rightarrow \mathbf{q})$ read as:

If p then q": p implies q

p is a sufficient condition for q

q if p

q whenever p

q is a necessary condition for p.

Ι	$f \rightarrow Th$	en	
р	q	$p \rightarrow q$	
Т	Т	Т	
Т	F	F	
F	Т	Т	
F	F	Т	

Here, p called **hypothesis** (antecedent) and q called **consequent** (conclusion).