

Hour: 1st

Name: Julia Wilkins

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Honors Geometry: Truth Tables

Let p = any statement
 q = any statement

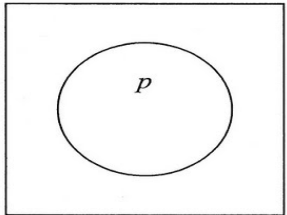
\rightarrow = implies
 \leftrightarrow = if and only if

t = both true

f = both false

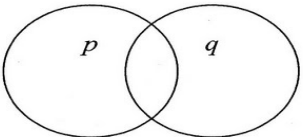
NOT
(negation)

| p | $\sim p$ |
|-----|----------|
| T | F |
| F | T |



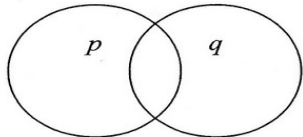
AND \cap
(conjunction) $p \wedge q$

| p | q | p and q |
|-----|-----|-------------|
| T | T | T |
| T | F | F |
| F | T | F |
| F | F | F |



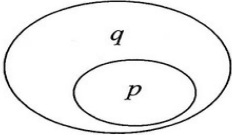
OR (inclusive) \cup
(disjunction) $p \vee q$

| p | q | p or q |
|-----|-----|------------|
| T | T | T |
| T | F | T |
| F | T | T |
| F | F | F |



CONDITIONAL \rightarrow
(implication) $p \rightarrow q$

| p | q | $p \rightarrow q$ |
|-----|-----|-------------------|
| T | T | T |
| T | F | F |
| F | T | T |
| F | F | T |



BICONDITIONAL
(equivalence) $p \leftrightarrow q$

| p | q | $p \leftrightarrow q$ |
|-----|-----|-----------------------|
| T | T | T |
| T | F | F |
| F | T | F |
| F | F | T |

