Formal Logic

p, q, r is a statement, (they have a value T/F)

Examples: p = "The number is even"

q = The number is prime
≈ 2, 3, -2, -3 examples

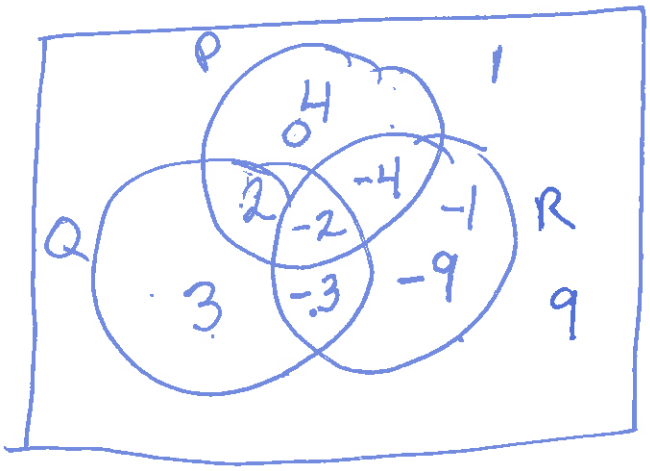
r = The number is negative.

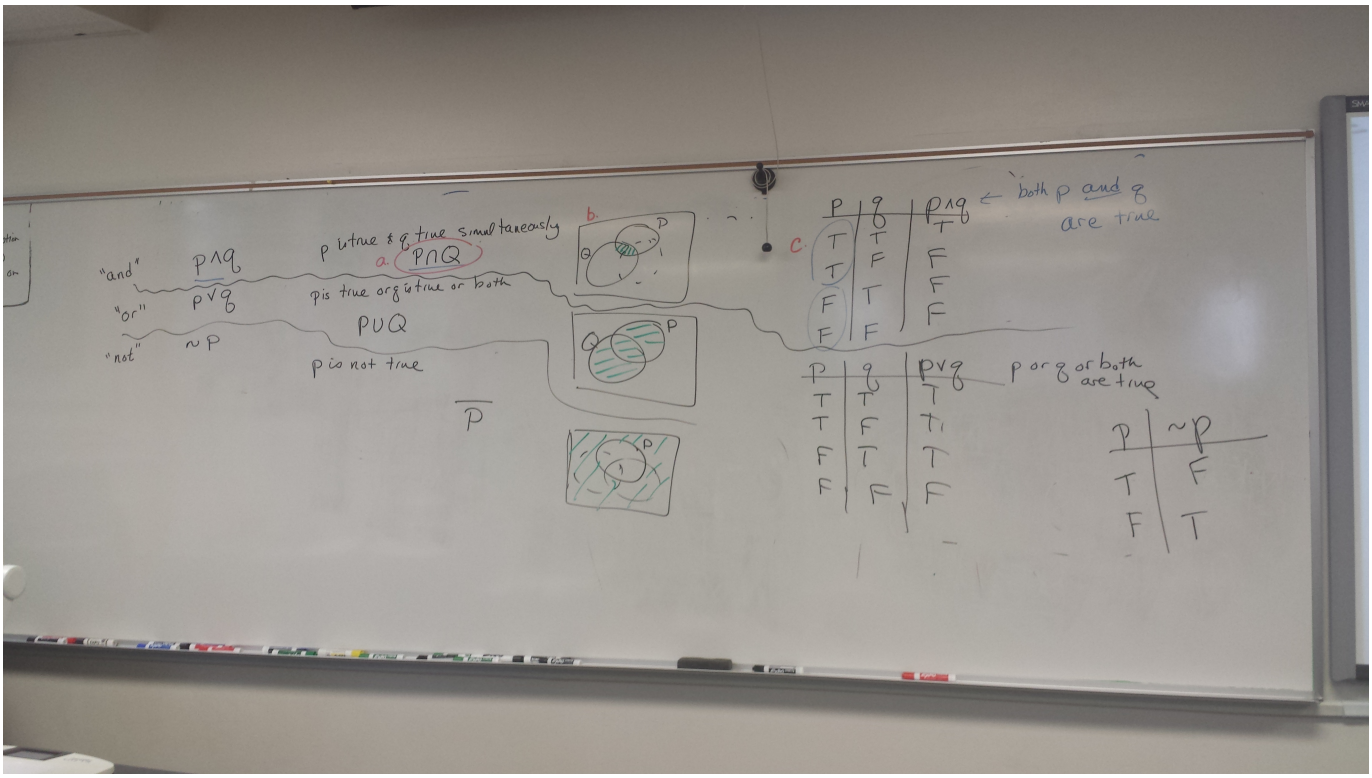
} 1/0 statements about integers

P = numbers for which p is true

Q = " " " q is true

R = " " " r is true




"and" p∧q
"or" p∨q
"not" ~p
p is true & q true simultaneously
a. P∩Q
p is true or is true or both
P∪Q
p is not true
$\overline{P}$
b.
P
Q
P
P
c.
p | q | p∧q
T | T | T
T | F | F
F | T | F
F | F | F
← both p and q are true
p | q | p∨q
T | T | T
T | F | T
F | T | T
F | F | F
p or q or both are true
p | ~p
T | F
F | T