

# 1.2 Negation

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- Statement can be either

True or False  
T F

We can Represent a statement  
with a Variable ... so that  
we do NOT have to write it.

Let  $p$  represent

"It is Cold"  $\rightarrow p$

$p$  is either  $T$  or  $F$

How can we write  $p$  so that  
it is the opposite?

"It is NOT Cold."

"not"  $p$  or the negation of  $p$

-Negation: If a statement is represented by "P", Then "not P" is the negation of that Statement.

\* Likewise "P" is the negation of "not P"

\*\* The symbol  $\sim$  to represent "not"

ex1) Let  $p$  represent: "It is snowing"  
 $q$  represent: " $9 \rightarrow 2$ "

write:

$\sim p \rightarrow$  It is Not Snowing.

$\sim q \rightarrow 9 \rightarrow \neq 2$

$\sim(\sim p) \rightarrow$  It is false  
It is Not Snowing

# O.T.L.

① Pg 6 : Exp.: 1-10(all)

Pg 7 : Written: 1-4(all)

#2 ~ ( ) → It is False