

# 1.4 Disjunction

Sept. 22, 2006

- Disjunction: "Joining 2 Statements with the word 'OR'"

A compound statement formed by joining 2 Statements with the Word "or".

\* The symbol " $\vee$ " is used for "OR"

Let  $p \rightarrow$  "Mr. G. Teaches Math"

$q \rightarrow$  "Five is an Even Number."

Combine + form a Disjunction.

$P \vee q \Rightarrow$  Mr. G. teaches Math or  
Five is an even Number.

$\uparrow$   
Symbol  
"read...  
 $P \text{ or } q$ "

$\nearrow$   
In Words.

Let  $r \Rightarrow$  "He-Man is a Cartoon"

$S \Rightarrow$  " $8+1=10$ "

Write the following disjunction <sup>Sentences</sup>

a)  $r \vee S \Rightarrow$  He-man is a cartoon or  $8+1=10$

b)  $r \vee \sim S \Rightarrow$  He-man is a cartoon or  $8+1 \neq 10$

c)  $\sim r \vee S \Rightarrow$  He-man is not a cartoon or  $8+1=10$

d)  $\sim r \vee \sim S \Rightarrow$  He-man is not a cartoon or  $8+1 \neq 10$

e)  $\sim(r \vee S) \Rightarrow$  It is false that  
He-man is a cartoon or  $8+1=10$

# O.T.L.

① pg 14-15: Written: 1-18(all)

Do Not determine  
the Truth Value