

2.3 continued:

OTHER  
Forms of conditionals:

\* If  $p$  then  $q$   
 $p$  implies  $q$   
 $q$  if  $p$

Practice determining truth values of conditionals and converses.

4) For all values of  $x$ ,  $x^2 = 25$  implies  $x = 5$ . (FALSE)  
 (X CAN = -5)

CONVERSE:  $x = 5$  implies  $x^2 = 25$ . (TRUE)

5)  $a^2 > 16$  if  $a > 4$ . (TRUE)  
 T Any # greater than 4 makes statement  
 if  $a > 4$  then  $a^2 > 16$  TRUE

CONVERSE: If  $a^2 > 16$  then  $a > 4$ . FALSE  
 b/c  $a = -5$  AND MAKE THE FIRST PART  
 TRUE BUT NOT THE SECOND.

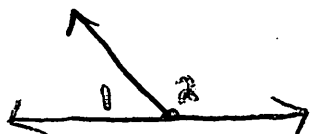
6) A number is even implies it is divisible by 2. TRUE  
 $p$  implies  $q$

CONVERSE: a number divisible by 2 implies it is even  
 TRUE

This is known as a tautology.

7) If 2 angles are acute then they are adjacent. F  → both acute but not adjacent

CONVERSE: If 2 angles are adjacent then they are acute. F



$\angle 2$  is obtuse