**Part B:** Use Venn diagrams to determine whether the following sentence pairs are equivalent. Symbolize the sentences. Draw a separate diagram for each sentence. Label the circles with the obvious letters. Remember that each circle represents an *affirmative* term only. Some of these diagrams will make use of the "outer region", so be sure to draw the rectangular outer border in those cases. Finally, say whether the diagrams show the sentences to be equivalent (YES/NO).

1. (a) No kangaroos are monkeys  
   symb:  
   _________________  
   (b) No monkeys are kangaroos  
   symb:  
   _________________  
   sentences equivalent?  
   ______

2. (a) Some giraffes are not dragons  
   _________________  
   (b) Some dragons are not giraffes  
   _________________  
   sentences equivalent?  
   ______

3. (a) All fish are swimmers  
   _________________  
   (b) All swimmers are fish  
   _________________  
   sentences equivalent?  
   ______

4. (a) All wizards are non-roosters  
   _________________  
   (b) All roosters are non-wizards  
   _________________  
   sentences equivalent?  
   ______

5. (a) Some non-bananas are peaches  
   _________________  
   (b) Some peaches are non-bananas  
   _________________  
   sentences equivalent?  
   ______

>> continued on back side >>
6 (a) All hats are gigantic  
(b) no hats are non-gigantic  

7 (a) Some ants are monsters  
(b) some non-monsters are non-ants  

8 (a) All non-spirits are bulky  
(b) no non-spirits are non-bulky  

9 (a) All planets are spheres  
(b) all non-planets are non-spheres  

10(a) Some non-ants are non-bugs  
(b) some bugs are not non-ants  

Ex. 3. 5. B.  
Name ____________________ / _______