

Worksheet #2  
Analyzing Arguments  
Due Friday, September 11, 2009

Name: \_\_\_\_\_

### Analyzing Deductive Arguments

For the following deductive arguments, draw a Venn Diagram to determine whether the argument is valid. If the argument is valid, determine whether the argument is sound.

1. Premises: All books are written by people.

Dracula is a book.

Conclusion: Dracula was written by a person.

2. Premises: If I am in my office, I am doing work.

I am in my office.

Conclusion: I am doing work.

3. Premises: If I am in my office, I am doing work.

I am not in my office.

Conclusion: I am not doing work.

4. Premises: If I am in my office, I am doing work.  
I am doing work.  
Conclusion: I am in my office.

5. Premises: If I am in my office, I am doing work.  
I am not doing work.  
Conclusion: I am not in my office.

### **Inductive and Deductive Arguments**

Determine whether the following arguments are inductive or deductive. For inductive arguments, determine whether the premises are true, discuss the strength of the argument, and assess the truth of the conclusion. For deductive arguments, draw a Venn diagram to determine whether the argument is valid. If a deductive argument is valid, determine whether the argument is sound.

1. Premises: Sparrows are birds, and they can fly.  
Pigeons are birds, and they can fly.  
Blue jays are birds, and they can fly.  
Geese are birds, and they can fly.  
Conclusion: All birds can fly.

2. Premises:  $3 \times 5 = 5 \times 3$   
 $7.8 \times 6 = 6 \times 7.8$   
 $3 \times \pi = \pi \times 3$   
Conclusion: If  $a$  and  $b$  are real numbers, then  $a \cdot b = b \cdot a$

3. Premises: All chairs are furniture.  
All furniture is made out of wood.  
This object is not made out of wood.  
Conclusion: This object is not a chair.

4. Premises: All teddy bears are soft.  
This stuffed animal is not a teddy bear.  
Conclusion: This stuffed animal is not soft.

5. Premises: Peas are vegetables, and are green.  
Broccoli is a vegetable, and is green.  
Asparagus is a vegetable, and is green.  
Conclusion: All vegetables are green.

6. Premises: Tom enjoys watching soccer.  
Tom likes to watch skiing.  
Tom enjoys watching marathons.  
The Olympics are filled with soccer games, skiing, marathons, and more.  
Conclusion: Tom will like watching all the events in the Olympics

7. Premises: If I go to bed early, I get enough sleep.  
If I get enough sleep, I am in a good mood.  
I am in a good mood.  
Conclusion: I went to bed early.

8. Premises: All sound deductive arguments are valid.  
That argument is sound.  
Conclusion: That argument is valid.