1.3 Describing and Critiquing Arguments

Group Activities

1. Draw a Venn diagram for each categorical proposition. Then write on the line whether the sets are disjoint, overlapping, or one is a subset of the other.

Relationship between the Sets

a. No cars are airplanes. _____

b. Some college students don't take psychology. _____

2. Determine whether each argument is inductive or deductive and explain.

a. All cats have a keen sense of smell. Fluffy is a cat, so Fluffy has a keen sense of smell.

b. All brown dogs in the park are small dogs. Therefore, all small dogs are brown.

c. My friends who are in college eat pizza. Pizza is affordable. Therefore, all college students eat pizza.

3. Draw a Venn diagram for each deductive argument and determine whether it is valid and sound. (Problems adapted from David Lippman http://www.opentextbookstore.com/mathinsociety/index.html)

a. Premise: All cats are mammals
Premise: A tiger is a cat
Conclusion: A tiger is a mammal

The conclusion is valid/invalid
The conclusion is sound/not sound

b. Premise: All firefighters know CPR
Premise: Jill knows CPR
Conclusion: Jill is a firefighter

The conclusion is valid/invalid
The conclusion is sound/not sound

c. Premise: Some cows are brown
Premise: Fido is not a cow
Conclusion: Fido is brown

The conclusion is valid/invalid
The conclusion is sound/not sound

d. Premise: All PCC Students Live in Portland
Premise: Trung is a PCC Student
Conclusion: Trung lives in Portland

The conclusion is valid/invalid
The conclusion is sound/not sound

e. Premise: If you live in Portland, you live in Oregon
Premise: Cara does not live in Oregon
Conclusion: Cara does not live in Portland

The conclusion is valid/invalid
The conclusion is sound/not sound

4. Share your ideas and examples on critical thinking from your reflections. Make a list of important elements of critical thinking: