**Question 1: Adjectives**

Are the adjectives in the sentences below intersective or non-intersective? Explain each of your answers briefly.

1. a. John is a *polite* student.
2. Bill is a *skinny* boy.
3. Mary is a *likely* winner (of the race).
4. This car is a *red* Volkswagen.
5. The conductor is a *Polish* immigrant.
6. This is *counterfeit* money.
7. Sue is a *true* believer.
8. Howard is a *criminal* lawyer.

**Question 2: Entailments and quantifiers**

We defined entailment between sentence A and sentence B as follows:  *A entails B if and only if whenever A is true, B is true.*

Do the sentences in (1a) and (2a) entail the sentences in (1b) and (2b)? Prove using the definitions given in class, or falsify by giving a counter example.

1. a. Every boy sings and dances.
2. Every boy sings and every boy dances.
3. a. No boy sings and dances.
4. No boy sings and no boy dances.

**Question 3: Entailments and equivalence**

We can define an equivalence relation between two sentences as follows:
*A and B are equivalent if and only if A entails B and B entails A.*
Given this definition, are sentences A and B below equivalent?

Furthermore, in class, we defined the meaning of a sentence as its truth-conditions. Given this definition, do sentences A and B mean the same thing? Is this a welcome consequence or an unwelcome consequence of our theory? Explain why. If this is a problematic result, can you think of a way to fix or improve it?

A. A unicorn is a unicorn.

B. A unicorn is a legendary horse-like animal that has a horn projecting from its forehead.