

## SYLLOGISMS: DEDUCTIVE REASONING

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**Remember:** There is a difference between asserting that a **premise** is untrue, and asserting that the **logic** of the argument is faulty. “All dogs can fly. Fido is a dog. Fido can fly.” That is a perfectly valid argument in terms of logic, but this flawless logic is based on an untrue premise. If a person accepts the major and minor premises of an argument, the conclusion follows undeniably by the sheer force of reason. If in an argument, the logic reaches a conclusion that seems absurd, it behooves you to analyze each sentence separately (to see if each **premise** is **true** without exception) and then to analyze the structure of the argument (to see if the **reasoning** of the argument itself is **valid**). Also be on the lookout for “equivocation,” the use of two different meanings of one word during the process of an argument.

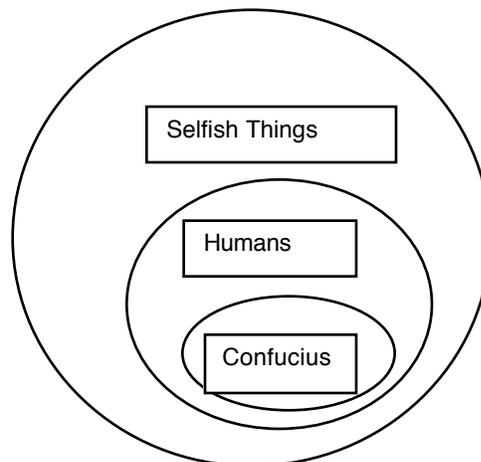
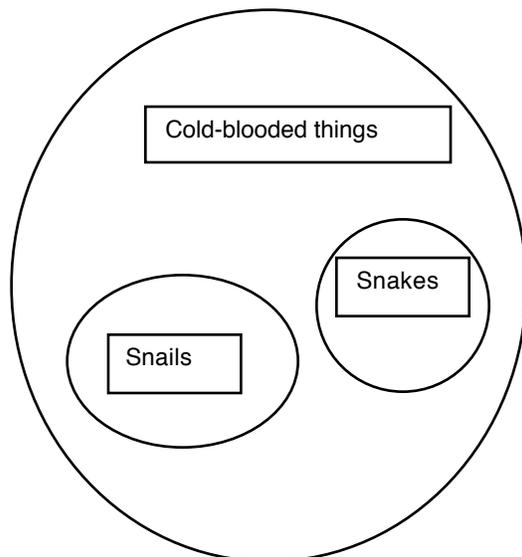
**Directions:** Decide whether the following syllogisms are valid in format (as opposed to using true premises). If one is invalid, either explain why, or illustrate using circles.

**Invalid example:** All snakes are cold-blooded.  
All snails are cold-blooded.  
All snails are snakes.

**Valid example:** All humans are selfish.  
Confucius is a human.  
Confucius is selfish.

**INVALID:** Snakes and snails could overlap as categories, but they both could also be in the largest circle without overlapping.

**VALID.** We might not agree that the individual premises are true, but if we accept these premises, the conclusion does logically follow.



1. All human societies are doomed to deteriorate over time.  
America is a human society.  
America is doomed to deteriorate over time.
2. No philosophers are evil.  
All Greeks are philosophers.  
No Greeks are evil.

3. All women are potential mothers.  
Betty is a potential mother.  
Betty is a woman.
4. All students are eligible for student government.  
No teachers are eligible for student government.  
No teachers are students.
5. All barbiturates are drugs.  
Marijuana is not a barbiturate.  
Marijuana is not a drug.
6. Pizza is a substance made of cardboard.  
All substances made of cardboard are good to eat.  
Pizza is a substance that is good to eat.
7. All rational people believe in rule by law.  
Some rational people are college professors.  
Some college people are believers in rule by law.
8. All purple items are green.  
All yellow items are green.  
All purple items are yellow.
9. Violent television influences some children in negative ways.  
Some children are violent.  
Some children are influenced by violent television.
10. All red items are blue.  
All pink items are red.  
All pink items are blue.
11. Since all robins have two legs,  
and since all birds are two-legged,  
it follows that all robins are birds.
12. Laughter is a meretricious act.  
All meretricious acts are melancholic in nature.  
Laughter is melancholic in nature.
13. All environmentalists are activists.  
Some activists are uninformed.  
Some environmentalists are uninformed.
14. As Emerson said, "All the world loves a lover."  
Now that I think about it, Susan is a part of the world.  
I am a lover, now that I think about it.  
Susan must love me! The logic is irresistible!
15. Nothing is better than God.  
Having a lobster is better than having nothing.  
Lobsters are better than God.
16. God is love.  
Love is blind.  
Ray Charles is blind.  
Ray Charles is God.
17. If he has leukemia, he will die.  
He will die.  
Thus, he must have leukemia