

Name \_\_\_\_\_

Points (20) \_\_\_\_\_

# Introductory Logic

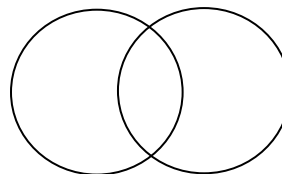
## Homework #13

(Due: 1/8/2013)

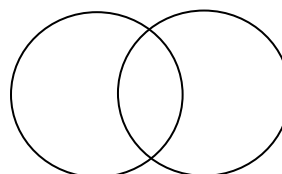
Fill-in the Venn diagrams in the space at the right for each of the statements given. Be sure to label each circle in standard order.

Read the following argument:

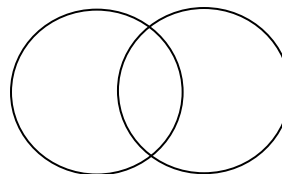
1. All mechanical devices are breakable things.



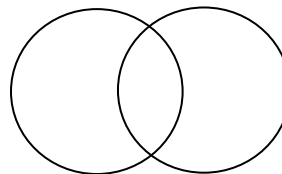
2. No marshlands are deserts.



3. Some Bible teachers are logic teachers.

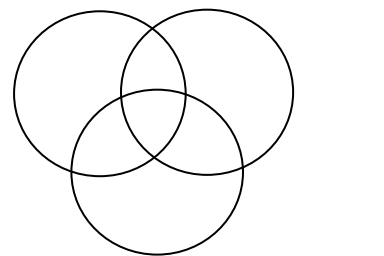


4. Some classes are not science.

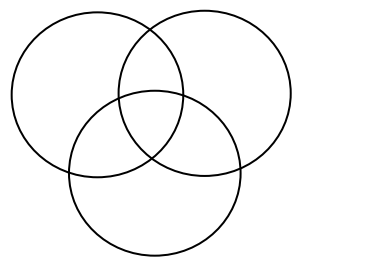


Test the validity of the given syllogisms by filling-in the Venn Diagrams in the space at the right of each syllogism. Write *valid* or *invalid* next to the diagram. (Be careful! These may not be in standard order.)

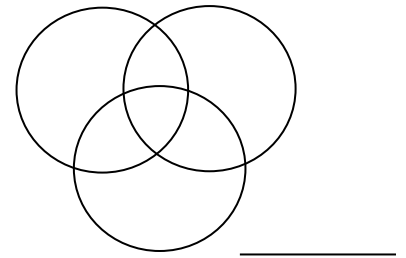
5. Some students in jr. high are not politically active, since no jr. high students are voters, and some politically active people are voters.



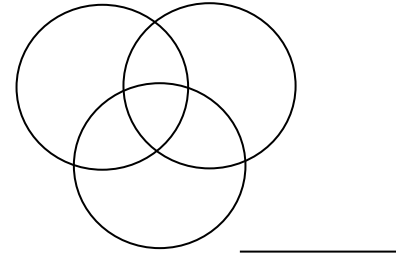
6. All members of the Taxpayer's Party are true Americans, and no true Americans are people searching for socialism to save society. Therefore, no members of the Taxpayer's Party are people searching for socialism to save society.



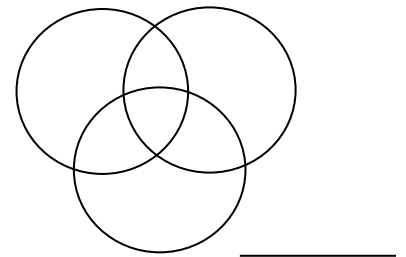
7. All providential acts of God are apparently accidental, so no miracles are providential acts of God, because some events which appear accidental are not miracles.



8. Some Socratic sages are not perspicacious people, since some Socratic sages are metaphorical masters, and some perspicacious people are also metaphorical masters.



9. Some pagans are idolaters, because no pagans are Christians, and no Christians are idolaters.



## Cranium Calisthenics

The Island of Knights and Knaves.\* On the Island of Knights and Knaves, knights always tell the truth and knaves always lie. A logician once visited this island and came across two inhabitants, "A" and "B". He asked, "Are you both knights?" A answered either yes or no. The logician thought for a while, but did not yet have enough information to determine what they were. The logician then asked A, "Are you two the same type?" (meaning both knights or both knaves). A answered either yes or no, and the logician then knew what type each one was. What type was each? (**Important:** In order to get credit, you must explain your answer - as if your reader could not understand unless you fully explain (or demonstrate with a table). Do not just put, "It's the only answer that works," etc.) If you get stuck, there is a hint on the website.



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\* From *The Lady or the Tiger? And Other Logic Puzzles*, by Raymond Smullyan. Random House, Inc. 1982.