

Introduction to Logical Reasoning

Problem Set #2

Although I strongly suggest that you write out answers to all these problems, you do *not* have to turn in any written responses. You do, however, need to be prepared to do these types of problems, for questions on the weekly quizzes and exams will primarily be drawn from the problem sets. The solutions to these problems will be provided, so you can check your own work and seek help from me as necessary.

We will devote considerable time to these types of problems during the next in-class workshop. In order to make that workshop productive, please make a solid start on them. That way you can use the workshop to address the difficulties you are facing.

If you do the extra credit logic puzzle, you must turn in a computer-type-written solution at the beginning of class on Sunday, September 16th.

Instructions

Each of the following problems presents an argument. For each argument, (1) underline any conclusion indicators, (2) circle any premise indicators, (3) circle and denote with a C the argument's main conclusion, and (4) underline and number each premise.

Problems

Part A: Do arguments 1 and 8–16 in Exercise 1.3 on pages 23–24 from *The Power of Critical Thinking* by Lewis Vaughn.

Part B: Do arguments 1, 2, 4, 6, 9, and 11 in Exercise 1.4 on pages 24–25 from *The Power of Critical Thinking* by Lewis Vaughn.

Part C: Do arguments 1–4 in Exercise 1.7 on pages 27–28 from *The Power of Critical Thinking* by Lewis Vaughn.

Note: There may a lot of exercises here. Do not feel obligated to do all of them. I often assign many exercises so that you have plenty of opportunities to practice the skills these exercises are trying to impart. I suggest doing just enough of them so that you are confident that you could use these skills on a quiz or an exam.

Extra Credit Logic Puzzle

The crew on the Qatar Airways flight to Washington, D.C. consists Mr. Rayhan, Mr. Mohammed, Mrs. Hafsa, Miss Ayah, Mr. Omar, and Miss Reema. The positions they occupy are pilot, co-pilot, navigator, head flight attendant, business class attendant, and economy attendant, though not necessarily in that order. The following facts are known:

1. The co-pilot is the pilot's grandson.
2. The navigator is the head flight attendant's son-in-law.
3. Mr. Mohammed is a bachelor without children.
4. Miss Ayah and Miss Reema are both unmarried without children.
5. Mr. Omar is twenty-two years old.
6. Miss Ayah is the business class attendant's step-sister.
7. Mr. Rayhan is the pilot's neighbor.

Question: Who holds each position?

To receive full credit you must justify your answer with a logical argument showing why you are 100% right. That is to say, this question has a definitive answer that can be justified without *any* guessing on your part.