**The Cub Reporter**

*Name* _____

*Date* _____

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**Background**

A cub reporter interviewed four people. He was very careless, however. Each statement he wrote was half right and half wrong. He went back and interviewed the people again. And again, each statement he wrote was half right and half wrong. From the information below, can you straighten out the mess?

The first names were Jane, Larry, Opal, and Perry. The last names were Irving, King, Mendle, and Nathan. The ages were 32, 38, 45 and 55. The occupations were drafter, pilot, police sergeant, and test car driver.

The chart provided with the problem is a guide to its solution. Each square in the chart represents a proposition. For example, the box where the "Larry" row meets the "pilot" column represents the proposition "Larry is the pilot". In solving the problem, you can put marks in the boxes to indicate what you know about the propositions. Several approaches to solving this problem have been successful. I prefer to use an X for those propositions that are false and an O to represent those that are true. Others have also indicated the status of a proposition that is linked with another proposition in an exclusive-or relationship; that is, if one of the linked propositions turns out to be true, then the other must be false, and vice versa. You can use whatever notation you find convenient to express these possibilities. If you choose to document linked propositions, it is probably wise to use the statement numbers (1-8) in the boxes; two boxes with the same number represent linked ! statements.

Hints:
1) Each interviewee was interviewed only once in each interview - i.e. Jane cannot have the last name of Mendle because both Jane and Mendle were interviewed during the second round of interviews.
2) Each person has only one job - i.e. Nathan cannot be both a drafter and drive test cars.

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**On the first interview, he wrote these statements, one from each person:**

| | |
|---|---|
| Jane | my name is irving, and I'm 45 |
| King | I'm perry and I drive test cars |
| Larry | I'm a police sargeant, and I'm 45 |
| Nathan | I'm a drafter, and I'm 38 |

**On the second interview, he wrote these statements, one from each person:**

| | |
|---|---|
| Mendle | I'm a pilot, and my name is Larry |
| Jane | I'm a pilot, and I'm 45 |
| Opal | I'm 55 and I drive test cars |
| Nathan | I'm 38 and I drive test cars |

| | Irving | King | Mendle | Nathan | Draft | Pol. S | Pilot | Car | 32 | 38 | 45 | 55 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jane | | | | | | | | | | | | |
| Larry | | | | | | | | | | | | |
| Perry | | | | | | | | | | | | |
| Opal | | | | | | | | | | | | |
| Draft | | | | | | | | | | | | |
| Police Seargeant | | | | | | | | | | | | |
| Pilot | | | | | | | | | | | | |
| Test Car Driver | | | | | | | | | | | | |
| 32 | | | | | | | | | | | | |
| 38 | | | | | | | | | | | | |
| 45 | | | | | | | | | | | | |
| 55 | | | | | | | | | | | | |

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**Your answers:**

|       | Last Name | Occupation | Age |
|-------|-----------|------------|-----|
| Jane  |           |            |     |
| Larry |           |            |     |
| Perry |           |            |     |
| Opal  |           |            |     |

**Instructions**
This is a very difficult problem. It often takes several hours to complete.  The problem is very similar to finding a bug in a computer program. It takes patience, persistence, and reflection on what you're trying to accomplish.  At multiple points you should pause, look at how you are approaching the problem and consider alternate paths.

At each 30 minute interval, write down the following items pertaining to the problem:
what you know
what you don't know
what goal/subgoal you are pursuing
what assumptions you are currently making

Reflective answers to these questions are as important as a good answer to the problem.

:30 minutes

1:00 hour

1:30 hour and a half

2:00 hours