

- a. This puzzle has different elements that can be used to solve it.

Specifically, each house has certain PROPERTIES.

Of these, a house can only have one VALUE for each PROPERTY associated with it.

Identify the six PROPERTY categories, and the five possible VALUES for each.

Hint: One property that can be easy to miss is HOUSE POSITION.

- b. Definitive data represents information that has concrete value.

An example would be: "Michigan Tech has a computer science department".

Identify at least FIVE clues that were definitive.

Use this format: "set X's PROPERTY to Y"

Where X and Y are the definitive VALUES given. PROPERTY is what Y belongs to.

- c. Definitive data not only tells us properties, but it can also reveal things that are NOT possible, as only one value can exist for each person on each property.

With the definitive data above, what possible values are eliminated?

Identify at least THREE things that the definitive data shows CANNOT be possible.

Use this format: "do NOT allow set of X's PROPERTY to Y".

- d. Relational data defines information that is dependant on other pieces of information.

We do not know exact position, but it reduces possibilities and links some together.

An example of this is: "Michigan Tech is across the street from the Portage".

We may not know where Michigan Tech is, or which side of the street the Portage is on.

Identify at least TWO clues that were relational.

Use this format: "force set of X's PROPERTY to be RELATION to Y"

Where RELATION represents how the data is connected, such as "plus or minus five".

Houses:

1) pink house

2) grey house

3) purple house

4) yellow house

5) teal house

Properties:

1) House position

2) House color

3) owned pets

4) hobbies

5) preferred drinks

6) person's home country

1) Set Koreans house to pink

2) Set Egypt's house to first house

3) Set yellow house's hobby to videogame

4) Set Brazil's hobby to knitting

5) Set
miside
house's
drink
to lemonade

1) do not allow Brazil's house to pink

2) do not allow Egypt's hobby knitting

3) do not allow yellow house to have touch

1) force set of teal house to be left of grey house

2) force set of Egypt person to be next to purple house

5. (100 points) The following is a modification of one of the most famous logic puzzles, "The Zebra Puzzle".

It would be pretty easy to look up the solution to this puzzle online.

If you tried to do it by yourself without any help, it could take a while.

Instead, we're going to think about how to communicate these clues in a programmatic way.

Please read the clues from the puzzle first.

Then, respond to the questions on the next page.

1. There are five houses.
2. The person from Korea lives in the pink house.
3. The person from Canada has a hound.
4. The person from Scotland drinks chai.
5. The teal house is immediately to the left of the grey house.
6. The person in the teal house drinks mocha lattes.
7. The person who does puzzles has a toucan.
8. The person in the yellow house plays video games.
9. In the middle house they drink lemonade.
10. The person from Egypt lives in the first house.
11. The person who figure skates lives in a house next to the house with a tabby cat.
12. In the house next to the house with a pony, they play video games.
13. The person who golfs drinks juice.
14. The person from Brazil knits.
15. The person from Egypt lives next to the purple house.
16. They drink La Croix in a house next to the house where they figure skate.

The puzzle's question is: who owns the zebra?

But, that isn't YOUR question.

See the next page for how we'll be breaking apart this puzzle!