

Programming Fundamentals - Assignment 1

Question 1



a) my equation is $4 - 4 = 0$

- b)
- i. moved top of 0 to the middle
 - ii. moved bottom-left of 0 to the top-left of 7
 - iii. removed bottom of 0 to change it to 4
 - iv. Added 1 to the bottom left of the last number
 - v. Add one to the bottom of the last number to make it 0

c) I primarily used **trial and error** to solve this puzzle. I began shifting the matchsticks around to see what would work. I also used **analogy** to help me solve this puzzle. I was able to pull from my past experience of solving the first matchstick problem from the lecture and seeing other students' attempts. This gave me familiarity and confidence. I also used a bit of decomposition, I broke the solution down into two pieces, modifying two numbers. If I could modify the first number with 3 actions that meant I had two actions left to get desired second number.

Assignment 1

Question 2:

		Lucky Charms				Eastern Zodiac				Western Zodiac			
		amber	hematite	malachite	turquoise	Dragon	Snake	Monkey	Pig	Gemini	Leo	Virgo	Aquarius
Person	Sandro Vec	x	✓	x	x	x	✓	x	x	x	x	x	✓
	Diana Mora	✓	x	x	x	✓	x	x	x	x	x	✓	x
	Linda Guim	x	x	x	✓	x	x	x	✓	✓	x	x	x
	Moreno Vid	x	x	✓	x	x	x	✓	x	x	✓	x	x
Western Zodiac	Gemini	x	x	x	✓	x	x	x	✓				
	Leo	x	x	✓	x	x	x	✓	x				
	Virgo	✓	x	x	x	✓	x	x	x				
	Aquarius	x	✓	x	x	x	✓	x	x				
Eastern Zodiac	Dragon	✓	x	x	x								
	Snake	x	✓	x	x								
	Monkey	x	x	✓	x								
	Pig	x	x	x	✓								

Clues

Answer

Person	Lucky Charms	Eastern Zodiac	Western Zodiac
Sandro Vecino	hematite	Snake	Aquarius
Diana Moraes	amber	Dragon	Virgo
Linda Guimas	turquoise	Pig	Gemini
Moreno Vidal	malachite	Monkey	Leo

Check Answer

Observation: This table is automatically filled according to the grid.

First, I used analogy when dealing with this problem because I had already solved the logic puzzles in class and understood how the negative relationships worked. The wording of the clues was familiar to me because of this

I realized after rereading that the wording Diana "OR" the aquarius is wearing the hematite. This implies that Diana is not the Aquarius.

The first clue was helpful because if each player must have at least one matching initials, that meant for the people with both initials in one block, they had to match either of those two and I could eliminate the others.

either the leo or the virgo are malachite

Moreno is not the dragon

Moreno is not wearing turquoise

Moreno has to either be the Monkey or the Virgo

Sandro doesn't wear amber.. and the snake wears amber or hematite? He could still be the snake if the snake is wearing hematite.. if the snake is wearing amber is not Sandro.

sandro and the monkey both don't wear amber.. is Sandro the Monkey?

Moreno is either the snake or the Monkey, but if he is Snake, that means he must be the Virgo for at least one initial to match. But he cannot be the virgo and the snake at the same time because he would be using up both of Sandro's initials, therefore, he must be the Monkey .

After deducing that Moreno had to be the monkey the puzzle came together very easily, Diana had to be the dragon and then sandro had to be the snake. It was then just a matter of finding cross connections between the different sub grids.