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Problem Solving

Cat, Parrot, Seed

1)

a) The 3 animals need to cross the river, there is only room for the man and 1 animal in the boat. The cat will eat the parrot, the parrot will eat the seeds if left alone. Nothing can get eaten.

b) You can transport animals and then bring one back is the insight not immediately visible.

c) Get the animals to the other side is the goal.

2)

a) The constraints are certain animals will eat each other if left alone.

b) The sub goal is to not let animals get eaten.

3) a) Bring an animal over, Bring another one over, Then bring the first one back.

4)

a) Each solution meets it goals

b) Each solution will work for all cases

5)

a) You would first transport the parrot and leave the cat and seeds on the riverbank. You would then bring the cat over and bring the parrot back with you. You then bring the seeds over, The seeds and the cat are now on the other side of riverbank. Then you go back and get the parrot and bring him to the other side and all three are now there.

b) I didn’t use any test cases

Socks in the Dark

1)

a) You have 3 different color socks with multiple pairs of each and you need to find 1 matching pair whilst selecting a minimal amount of socks.

b) You only need to get 1 pair of socks.

c) The goal is to select matching pair of socks, And also 1 matching pair of each color.

2)

a) The constraints are you can only check the socks in another room because that room is dark.

b) The sub-goal to select the most minimal amount of socks possible

3) a) A possible solution would be to just grab all the socks and go check them in another room real quick then put them all back so you only make one trip.

4)

a) This solution would work but you wouldn’t be grabbing a minimal amount of socks you’d be grabbing all of them.

b) Each solution will work for all cases.

5)

a) For getting one pair of socks you would just grab 4 socks, You would have at least 1 pair the same. To get 3 pairs of different colors the only thing I can think of is to just grab all the socks.

b) I didn’t use any test cases

Predicting Fingers

1)

a) You are skipping a finger everytime you count through them and need to find out what finger you will stop on when you reach 1-10, 1-100, and 1-1000.

b) Doesn’t matter that shes using fingers and you can use objects to determine the same thing.

c) The goal is to see what finger she will stop on.

2)

a) There are no constraints from what I can tell.

b) My sub-goal is to finger out some sort of math to figure it out.

3) a) A possible solution would be counting to 1000 on your own fingers and hoping you don’t mess up and also hoping you don’t spend an hour doing it.

4)

a) This solution would work but is very time consuming.

b) Each solution will work for all cases.

5)

a) I found out that the pointer finger and ring finger both rotate every 100.

b) The only test case I used was my own fingers to go through a couple times to see if theirs some type of math involved, Then I also made fingers in photoshop and put numbers on them so I could see them all.