**A Cat, a Parrot, and a Bag of Seed –**

A man has himself, a parrot. a bag of seed, and a cat. He cannot leave the cat with the parrot or the cat will eat the parrot, and he cannot leave the parrot with the seed or the parrot will eat the seed. But he only has room for himself and one other object on his boat.

If you bring one object you are not obligated to leave that object there you can pick it up and bring it back so you don’t leave the wrong objects together.

The overall goal is to cross the river with all of his objects and not lose any in the process.

The constraints are that the Cat and the Parrot cannot be left together and the Parrot and the bag of seed cannot be left together.

Goal - Get objects to other side without losing any.

Goal – Don’t leave Parrot with Cat

Goal – Don’t leave Parrot with Bag of Seed.

A possible solution is to bring the parrot across then go back for the cat and bring the cat across. After the cat gets across you bring the parrot back to the other side and grab the bag of seed and then return to the cat with the bag of seed. After that you can return to the other side grab the parrot and cross the river not leaving any of the wrong object together.

The solution does meet the goals because no object was left with the wrong object at any given time.

**Socks In The Dark -**

You are trying to pick socks in the dark and are trying to guarantee one matching pair. And then you are also wondering how many socks you should take out to guarantee a matching pair of each color.

The overall goal is to end up with one matching pair.

The overall goal is to end up with a matching pair of each color.

The constraints are that you have 10 black socks, 6 brown socks and 4 white socks.

Goal - To get one matching pair of socks

Goal – To get one matching pair of each color of sock.

The solution to getting one pair of matching socks would be to take at least four socks.

The solution to get one pair of each color sock would be to take every sock out and check.

**Predicting Fingers -**

The problem is that we have to figure out which finger that 10, 100, and 1000 lands on with the way that she counts using her fingers.

Some insight I have to offer is that the finger that the 10 lands on could be of some significance if we are trying to go to 100, and 1000 which are divisible by 10.

The overall goal is to figure out which fingers 10, 100 and 1000 lands on.

Goals – Find 50

Goals – Find patterns

Index – 10

Ring – 20

Ring – 30

Index – 40

Index – 50

Ring – 60

Ring – 70

Index – 80

Index – 90

Ring - 100

The solution is that every 20 (other then the first 10) switches between the index finger and the ring finger, and every 100 switches between the index and ring finger. 10 is on the index

100 is on the Ring and

1000 is on the Index