James Stanbridge 0000247763

Date: 6 Feb 2014

Class Number: 201402 Section: 01 (Online)

Problem Solving

A Cat, A Parrot, and a Bag of Seed

1) Define the Problem

In this scenario, the man must transport three things across a river in a boat that can only carry himself and one of the things. Meaning that he has to take them one at a time. The added catch is that, when left alone together, some of the things will destroy other things. So the man has to figure out what order to take the things safely across in.

2) Break the Problem Apart

In this problem we have to successfully get a cat, a bird, and a bag of seed across a river one at a time while ensuring that each object not being taken across is safe. This applies to both sides of the river, as I’m sure the cat will eat the bird on either side and the bird will eat the seed on either side. We have to work within the constraints presented while thinking outside the box in areas where constraints are not present.

3) Identify Potential Solutions

The man could:

a) Put the animals into cages to prevent them from eating each other or the seed.

b) Figure out the correct order to take them across the water in.

c) Abandon one of the objects to get the other two across.

d) Try to find a bigger boat or get help from someone.

4) Evaluate Each Potential Solution

a) This solution would work as the man would be able to eliminate the constraint of worrying about the safety of his cat, bird, and bag of seed while transporting them.

b) This would be the optimal solution, provided that there is actually a way to get everything across the river safely without any additional equipment or help.

c) This solution is not optimal as the man would lose one of his things during the transporting and the goal is to get all three things across safely.

d) This solution has potential, but it is working outside of the context of the problem itself. I’m sure that if there were a source of help readily available the man would not be faced with this problem to begin with.

5) Choose a solution and develop a plan to implement it.

Socks in the Dark

1) Define the Problem

The main problem here is that you must correctly select pairs of socks that only differ in color while not being able to see them.

Predicting Fingers

1) Define the Problem

The key to this problem is figuring out the mathematical pattern so that you do not have to literally count to 1000 in order to find out what finger the girl would stop on when counting to 1000, or any other number.