**A Cat, a Parrot, And a Bag of Seed**

**The Problem***:* A man needs to get a cat, a parrot, and a bag of seed from one side of a river to the other. The boat he is suing only has room for himself, and one other item. If the man should leave the cat with the parrot, the cat will eat the parrot. If the man should leave the parrot with the bag of seed, the parrot will eat the bag of seed.

**Insight:**My first initial thought is that he has the same problem on both ends of the river. If he leaves the cat with the seed and transports the parrot, the next item he transports will either feed the parrot or devour it.

**Goal:**The overall goal is to transport all three items from point A to point B without leaving the combination of the other two that will interact in a negative way.

**Breaking The Problem Apart:**

**Constraints:**The obvious constraints are that he can only leave the cat with the seed to begin with, but will be forced to leave the parrot with either the cat or the bag of seed when he returns to transport the other item in question.

**Sub Goals:**The sub goal to the problem is to get one item across the river that will not negatively impact the ultimate goal by negative interaction.

**Potential Solutions:**

**Possible Solutions to Sub Problems:** One out of the box way he can solve this is by making the parrot fly and circle above while he transports to cat and bag of seed. Then he could have the parrot land on the other side, but this is not a feasible solution.

*Solution Evaluation:*

*Does Each Solution Meet Goals:*

*Will Each Solution Work For All Cases:*

*Solution Implementation:*

**Full Solution Explanation***:* This is my solution to the problem: The Man is to leave the cat with the bag of seed and transport the parrot to the other side. He is then to return to the cat and the bag of seed and transport the cat to the other side. Once he is on the opposite side with the cat and the parrot, he is to return the parrot to the first side of the river. Once there, the man is to transport the bag of seed in the boat and leave the parrot. He then returns to the other side and leaves the seed with the cat while he for the last time returns to the other side to transport the parrot back to where the cat and seed are waiting.

*Test Case Scenarios I Tried To Make Sure The Solution Works:*

**Socks in the dark**

*The Problem:*

*Insight:*

*Goal:*

*Breaking The Problem Apart:*

*Constraints:*

*Sub Goals:*

*Potential Solutions:*

*Possible Solutions to Sub Problems:*

*Solution Evaluation:*

*Does Each Solution Meet Goals:*

*Will Each Solution Work For All Cases:*

*Solution Implementation:*

*Full Solution Explanation:*

*Test Case Scenarios I Tried To Make Sure The Solution Works:*

**Predicting Fingers**

*The Problem:*

*Insight:*

*Goal:*

*Breaking The Problem Apart:*

*Constraints:*

*Sub Goals:*

*Potential Solutions:*

*Possible Solutions to Sub Problems:*

*Solution Evaluation:*

*Does Each Solution Meet Goals:*

*Will Each Solution Work For All Cases:*

*Solution Implementation:*

*Full Solution Explanation:*

*Test Case Scenarios I Tried To Make Sure The Solution Works:*