**Problem 1**

1. **Define The Problem -**

a) How can we get all 3 items across the river with out leaving the wrong ones together?

b) Will the cat eat the seed?

c) The overall goal is to get the all 3 across the river

1. **Break the problem apart-**
2. One constraint would be that the cat will eat the bird and the bird will eat the seed
3. Not leave the wrong two items together

**3) Identify Potential Solutions -**

a) Leave the cat and the seed together

**4) Evaluate each potential Solution –**

a) Yes the solution meets the goals

b) Yes the solution will work for both cases

**5) Choose a Solution and Develop a Plan to Implement it**

a) Leave the cat and the seed and take the bird, comeback and get the cat, then comeback and get the seed

b) The cat will eat the bird and the bird will eat the seed but the cat won’t eat the seed

**Solution – Take the Bird come back and get the cat and then the seed**

**Problem 2**

1. **Define The Problem -**

a) Whats the min a amount of socks you can grab to get a match

b) are they already mated up

c) The overall goal is to get a matching pair of socks

1. **Break the problem apart-**
2. There are only 2 white socks
3. Not grab all one color

**3) Identify Potential Solutions -**

a) Grab 2 of each color

**4) Evaluate each potential Solution –**

a) Yes the solution meets the goals

b) Yes the solution will work for both cases

**5) Choose a Solution and Develop a Plan to Implement it**

a) grab four socks to get mates and 12 socks to get on of each color

b) if you grab too few you wont get one of each or a match

**Solution – Grab at least 4 socks the get at least on pair and 12 socks to get one of each color**

**Problem 3**

1. **Define The Problem -**

a) Whats the min a amount of socks you can grab to get a match

b) are they already mated up

c) The overall goal is to get a matching pair of socks

1. **Break the problem apart-**
2. There are only 2 white socks
3. Not grab all one color

**3) Identify Potential Solutions -**

a) Grab 2 of each color

**4) Evaluate each potential Solution –**

a) Yes the solution meets the goals

b) Yes the solution will work for both cases

**5) Choose a Solution and Develop a Plan to Implement it**

a) grab four socks to get mates and 12 socks to get on of each color

b) if you grab too few you wont get one of each or a match

**Solution – Grab at least 4 socks the get at least on pair and 12 socks to get one of each color**