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Web Programing Fundamentals

**Problem Solving**

**1). A Cat, A Parrot, and a Bag of Seed.**

A man needs to figure out how to transport a parrot, a cat and a bag of seed across a river, while having no room but himself and one other item on the boat. He can’t leave any of the three items together or something could get eaten.

You need to create space, and space can be created with the man allowing more room by sitting. He creates a second sitting area for something in his lap or on his head. Need to make space while keeping certain items separate from each other.

The man sits on the seed, while the cat sits on the boat and the parrot on the man’s head.

I have created a simple picture.

**2). Socks in the Dark.**

You have 20 socks in a drawer, 5 pair of black, 3 pair of brow and 2 pair of white. I need to figure out while in the dark; what is the smallest amount of sock I would need to pull out matching pairs. But I would not be able to check the socks I picked until choses to make sure those are the right matching socks.

1. At least 1 matching pair.
2. At least 1 matching pair of each color.

What needs to be done is decide or figure out what would be an effective way to coordinate the socks. I would basically ball each pair of socks so your numbers of 20 socks would be cut in half. After that you need to place each color next to each other, and just remember how many you have of each color and count across to get to the next color to pull it out. This can be done and would work for both **A**, and **B**.

**3). Predicting Fingers.**

A little girl counts using the fingers of her left hand as follows: She starts by calling her thumb 1, the first finger 2, middle finger 3, ring finger 4, and little finger 5. Then she reverses direction, calling the ring finger 6, middle 7, first finger 8 and thumb 9, after which she calls her first finger 10 and so on. If she continues to count in this manner, on which finger will she stop?

1. What if the girl counts from 1 to 10

I think the Ring finger.

1. What if the girl counts from 1 to 100
2. What if the girl counts from 1 to 1000