Arick\_Vince\_ProblemSolving

A Cat, a Parrot, and a Bag of Seed:

A man has enough room on the boat for himself, and one other item (cat, parrot, and bag of seed). He has to choose what two items he needs to leave behind safely. Breaking the problem apart the parrot would eat the seeds, and the cat would eat the parrot. The solutions leave the cat and the seed together.

Socks in the Dark:

Problem1:

There are 20 socks in a drawer; 10 black, 6 brown, and 4 white how many will I need to pick to get a matching pair in the dark; with the least number of selecting through the drawer?

Breaking it apart:

You have a better chance of picking black socks compared to others; less chance of picking white.

Potential Solutions:

Can pick 6, 4, or 3

Evaluate potential solution:

Picking 6 and have a better chance of getting more than 1 pair. Can pick 4, get one of each color, and the extra would be a match. Pick 3 have 50% chance of picking black.

Solution:

To pick the least and be guaranteed would be 4.

Problem2:

There are 20 socks in a drawer; 10 black, 6 brown, and 4 white how many will I need to pick to 2 matching pairs in the dark; with the least number of selecting through the drawer?

Breaking it apart:

You have a better chance of picking black socks compared to others; less chance of picking white.

Potential Solutions:

Can pick 6, 9, or 12

Evaluate potential solution:

Picking 12 and have a better chance of getting 2 pairs. Can pick 9, get one of each color, and the extra would be a match. Pick 6 but chances are not good to pick 2 pairs of white.

Solution:

To pick the least and be guaranteed would be 9.