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.

Predicting Fingers:

Problem a little girl is counting on one hand starting with her thumb as 1, first finger 2, middle finger 3, ring finger 4, little finger 5. Starts counting reverse 6 ring finger, 7 middle finger, 8 first finger, and 9 thumb.

a) What if she counts 1 to 10

b) What if she counts 1 to 100

c) What if she counts 1 to 1000

Breaking it apart

Potential Solutions

Evaluate potential solution

Solution