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

A man finds himself on a riverbank with a cat, a parrot and a bag of seed. He needs to transport all three to the other side of the river in his boat. However, the boat has room for only the man himself and one other item (either the cat, parrot or seed). In his absence, the cat could eat the parrot, and the parrot would eat the bag of seed. Show how he can get all the passengers to the other side, without leaving the wrong ones alone together.

**Define the problem. What is the goal? Any insight that isn’t immediately apparent.**

The goal is for the man to transport all of the items across the river. The problem is that the boat is not big enough to transport all of the items at the same time.

**What are the constraints? Sub-problems?**

A constraint is the size of the boat, which only allows the man to transport one item at a time. Another constraint is that the man is alone. There are two sub problems that are the cat will eat the parrot if left unattended, and the parrot will eat the seeds if left unattended.

**What are potential solutions?**

Potential solutions are to get a bigger boat, to find additional help, or to keep the cat separate from the parrot and the parrot separate from the seeds.

**Evaluate each solution?**

**Explain the solution in detail.**