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

**Problem:**

A man has to use his boat with limited space to carry himself and one of his 3 items, a parrot, a cat, and a bag of seed. He is faced with the dilemma that if he only takes one at a time, he risks losing one of the items.

**Goal**:

To get all 3 items across the river via his boat without incident or loss to all 3 items.

**Smaller Problem/Constraints:**

* Parrot will eat seeds if two are left alone while man transports his cat across the river.
* Cat will eat parrot if left alone while man transports seed across river.
* Boat only has room for man and one item to transport.

**What isn’t visible from word problem:**

* The size of the boat.
* How much weight can the boat handle?
* What type of boat (motor, row, etc.)?
* The river’s current and direction.
* The weather on that particular day.
* The size of the bag of seed.
* The size and type of cat.
* The size and type of parrot.
* How wide is the river from bank to bank?
* How much travel time between river’s banks?
* What items are of significant importance?
* Is the boat in a port or in the wilderness? Is there civilization around?

**Possible Solutions:**

* Kill both the parrot and cat
* Let the cat go
* Let the parrot go
* Plant or sell the seeds
* The man could put the parrot on his shoulder, hold the cat on his lap, and place the seeds in the reserved open space. Take the boat across the river, task completed.
* The man could put the parrot on his shoulder, sit on the bag of seed, and place the cat in the reserved open space. Take the boat across the river, task completed.
* The man could put the parrot on his shoulder, transport the seeds in the reserved open space and drop them off on the other side. He would then take parrot with him back to the original point of origin. While keeping the parrot on his shoulder, he would place cat in reserved open space and take the cat to the other shore. Task completed.