**Problem Formulation**

1. State
   1. Informally: The items in the fridge
   2. Formally (mathematically)
      1. S = {(x0, x1, …, xm - 1) | x0, x1, …, xm - 1 <= y, x0 + x1 + … + xm – 1 <= z}
      2. Where m = the number of different items, y = maximum allowed number of each item and z = the capacity of the fridge
2. Action
   1. Informally: Purchase items
   2. Formally (mathematically)
      1. A = {(x0, x1, …, xm - 1) | x0, x1, …, xm - 1 <= y, x0 + x1 + … + xm – 1 <= n}
      2. Where m = the number of different items, y = maximum allowed number of each item and n = the maximum number of items we can order
3. Transition
   1. At the beginning of each week, given the current inventory of our fridge, we purchase food and at the end of the week, we are left with the number of items not consumed in the fridge.
4. Reward

**Conceptual Arguments**

My chin is a triangle. Your argument is invalid

**Description of Method**

Buy your own food

**The Level Our Method Solves and Why**

Our method solves a level that no one can make it to. How can we possibly explain that?