NTC Equipment: You are preparing to ship equipment for the advance echelon of a unit deployment. You must ship at least **4 tons of equipment** by some combination of *line haul* or *rail head*. You are allotted **3 tons to ship via rail** at a cost of **$2 per ton**. You are allotted **4 tons of shipping via truck** at **$6 per ton** (all dollar amounts are in hundreds of dollars). All of your equipment must arrive in at most **12 days**. Line haul is typically much faster and takes an average of **2 days per ton** while rail takes an average of **3 days per ton**. Formulate a linear program that minimizes the cost of shipping equipment to NTC.

a) In the *Context of the Problem*, explain how your model conforms to the linear programming assumptions. There are 4 total, choose 2 to explain:

   i)

   ii)

b) Make a table that outlines the parameters of the problem.

c) Define the decision variables.

d) Formulate the constraints and objective function.

e) Use the graphical method to define the feasible region and determine the optimal solution.