



3. Your boat company makes four different kinds of boats: Large sailboats (at \$1200 profit per boat), small sailboats (@ \$930), motorboats (@ \$1050) and sailboards (@ \$750). Each boat requires some of your raw materials on hand, according to the table that follows. Explain below your answers to the following three questions:

Raw Materials	On Hand	Requirements by Product			
		Large Sailboat	Small Sailboat	Motorboat	Sailboard
Sailcloth	700	4	3	0	1
Glass Fiber	1,380	8	3	4	2
Epoxy Resin	1,280	3	3	3	2
Aluminum	1,100	4	2	2	2
Engines	120	0	0	1	0

- a. What will be your total profit if you devote all your resources to making your most profitable boat? Is this a good plan?
- b. Specifically, could you make a swap in your production plan to increase your total profit? If not, why not? If so, by how much? Have you found the best plan yet?
- c. If you could have a bit more of one raw material, which do think would do you the most good? How much would you be willing to pay for an extra unit of it?