48. (a) See graph. The feasible region now becomes infeasible. This is because there are no points that will satisfy both constraints.

(b) To produce 30 tons of fuel additive and 15 tons of solvent base you would need another $1\frac{1}{2}$ tons of material 3.

The first part was easy to see. The two graphs do not have any similar points, thus there would be no feasible region. Part b was a little tricker for me to understand. Looking at the graph, constrait 3 was the only one not in the graph for the minimum production requirement, thus I thought that the problem would be with material 3. I put in the values of the minimum production requirements into this constraint, and I came up with $22\frac{1}{2}$, which is $1\frac{1}{2}$ less than what was available. Thus, if we had $1\frac{1}{2}$ more tons of material 3, the minimum production requirements would work.