HW 10 HONR 209M. DUE DUE on Friday Dec 13 AT the Final

1. (0 points) What is your name? Write it clearly. Staple your HW. When is the final?

2. (50 points) If Fingers works alone, she can steal 20 dollars. If Wheels works alone, she can steal 90 dollars. If they work together they can steal 100 dollars. Intuitively they SHOULD NOT work together since working separately they get a total of 110 dollars. In this problem we will see that the math bears this out.

   (a) If they use the method of making their happiness EQUAL (that is, if Fingers gets x, Wheels gets y, make sure $x - 20 = y - 90$ and $x + y = 100$) then how much does each get? Which one would OBJECT to this deal.

   (b) If they use the method of making their shares PROPORTIONAL to what they could do on their own (that is, if Fingers gets x, Wheels gets y, make sure $x/y = 20/90 = 2/9$ and $x + y = 100$) then how much does each get? Which one would OBJECT to this deal.

3. (50 points) If Fingers works alone, she can steal 20 dollars. If Wheels works alone, she can steal 90 dollars. If Boom Boom works alone, she can steal 110 dollars. If Fingers and Wheels work together they can steal 200 dollars. If Fingers and Boom Boom work together they can steal 300 dollars. If Wheels and Boom Boom work together they can steal 400 dollars. If they ALL work together then can steal 1000 dollars.

   Write down the linear program that maximizes minimal happiness (what I did in class). You DO NOT need to solve it.