

HW 2 HONR 209M. Morally DUE Tuesday Feb 10

NOTE: A *Scenario* is a ranked ordering of items for both Alice and Bob with assigned point values that add up to 100.

EXAMPLE of a Scenario:

Alice:

MP3s-20, SOFA-20, BDS-20, TV-10, IPAD-10, CATS-17, CASH-3

Bob:

MP3s-25, BDS-30, SOFA-10, IPAD-10, CATS-10, TV-15, CASH-0

1. (0 points) What is your name? Write it clearly. Staple your HW. When is the first midterm? When is the final? IF YOU CAN'T MAKE THE FIRST MIDTERM (which is at night) LET ME KNOW BY Feb 10 SO WE CAN MAKE OTHER ARRANGEMENTS.

2. (80 points) There are 7 items to split up between Alice and Bob. They are

MP3s, CATS, TV, CASH, SOFA, BDS, IPAD

Alice and Bob will be doing ABABABA. Alice and Bob will be assigning POINTS to each item that add up to 100, even though they are NOT doing the AW protocol. Assume they do not know each others preferences and that they both always take the top item that is left according to their own preferences. For the following either give a scenario where it happens OR prove that it can't happen. If you give a scenario describe what happens (e.g. "Alice gets the Cats, Bob gets the Sofa, . . .")

- (a) *Every item is worth between 0 and 40 Alice assigns a DIFFERENT value to each item. Bob assigns a DIFFERENT value to each item. When the allocation is done both Alice and Bob have over 90 points worth of goods (in their own minds of course).*
- (b) *Every item is worth between 3 and 20 Alice assigns a DIFFERENT value to each item. Bob assigns a DIFFERENT value to*

each item. When the allocation is done both Alice and Bob each have over 55 points worth of goods (in their own minds of course). They NEED NOT have the same number of points.

3. (20 points) Assume that the points are as follows:

ALICE:

MP3s-20,CATS-10, TV-25,CASH-5, SOFA-20,BDS-15, IPAD-5

BOB:

MP3s-30,CATS-20,TV-5,CASH-10,SOFA-5,BDS-20, IPAD-10

Do AW and report how it comes out. Assume all items are continuous.