

MATH 1300 - Nature of Mathematics
Spring 2014

Assignment #2
Due date: Friday, February 7

1. Suppose that 5 players are dividing up some assets. Explain what it means (according to the book's definition) to have a "Fair division of the assets".
2. If you are using one of the methods of fair division from Chapter 3 is it better to be a divider or a chooser? Explain why.

For problems 3, 4, and 5 include any intermediate work used to find the answer.

3. Bob and Ray are splitting a foot-long sub sandwich which is 4 inches of turkey, followed by 8 inches of ham. Bob likes ham twice as much as turkey and Ray likes turkey twice as much as ham.

a) Suppose that Bob is the divider. How should he cut the sub into two shares? (You can describe different shares of the sandwich using the ruler and interval notation as in the book).

b) Specify which share Ray should choose from the two pieces in part a).

c) Now suppose that Ray was the divider. How should he cut the sub into two shares?

d) Specify which share Bob should choose from the two pieces in part c).

4. p.95 #30

5. p.98 #38