

MA 103 TEST 2

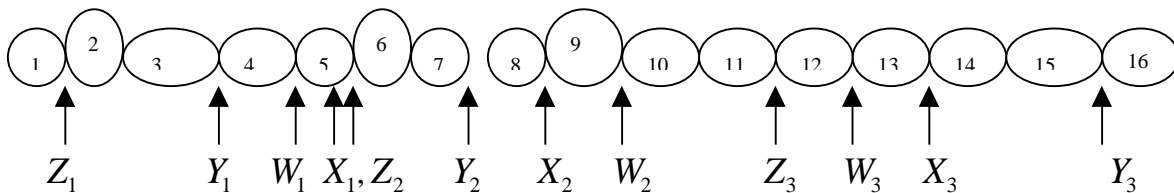
1. Five suite mates are dividing a pizza using the lone divider method. The Chooser declarations are as follows: Chooser 1: {S1, S2}, Chooser 2: {S2, S3, S4}, Chooser 3: {S2}, Chooser 4: {S3, S5}.
 - a) Show the results of this scheme.
 - b) Is there more than one solution? If so, what is it?

2. Ann, Bob, Carol, and Don agree to use the sealed bid method to divide their great-aunt's estate that consists of a house, a vacation cabin, and a boat. The bids are:

	Ann	Bob	Carol	Don
House	120000	200000	140000	180000
Cabin	60000	40000	90000	50000
Boat	30000	24000	20000	20000

Describe the results of the division.

3. Four Players { W, X, Y, Z } agree to divide the 16 items shown below by lining them up in order and using the method of markers. The players' bids are as follows:



- a) Describe the allocation of items to each player.
- b) Which items are left over?
- c) How might you distribute the left-overs?

(OVER)

4. A transit company has four bus routes A, B, C, and D. 100 buses are to be assigned to the routes according to the number of riders on each route.

Route	A	B	C	D
Riders	12444	36503	19581	31472

- c) Find the standard divisor and each route's standard quota
d) Apportion the buses using Hamilton's method
e) Apportion the buses using Jefferson's method.
5. Three players X, Y, Z decide to divide a \$12 cake that is half orange and half strawberry using the lone chooser method. X likes only orange and cuts first. Y likes only strawberry and makes the first choice. Z likes strawberry twice as much as orange.
- d) Describe a possible fair division of the cake.
e) How much value does each player receive?

