1. List the members of your group below. Underline your name.

2. (10 pts.) Fill in the blank entries in the following tables, indicating the number of runs on each of the five tapes used in a *polyphase merge-sort of order 4*. Row n of each table summarizes the distribution of runs on the tapes immediately following the nth merge. We number rows from 0 and the 0th row summarizes the initial distribution of runs (before any merges).

	# runs on tape				
merge	1	2	3	4	5
0	10	9	5	6	0
1					
2					
3					
4					
5					
6					

	# runs on tape				
merge	1	2	3	4	5
0	8	8	7	7	0
1					
2					
3					
4					
5					
6					
7					
8					

3. (10 pts.) Using the method suggested by Reynolds's paper, determine the initial distribution of 82 runs on 6 tapes for a 5-way polyphase merge. That is, indicate the number of runs initially written to each of the tapes, numbered 1 through 6. Show the intermediate steps used in arriving at the final distribution. Then indicate the result of each merge step in tabular form, as in Question 2, until only one run remains.