

Math 235 Fall 2000
Weekend Puzzles #3

The following puzzles are for your enjoyment only. I will never ask questions like these on quizzes or tests. You may do them or not do them as you see fit. Answers to these puzzles will be given on the next Weekend Puzzle sheet.

This week's puzzles are taken from the book *101 Puzzles in Thought & Logic* by C.R. Wylie Jr. Making table of values may help somewhat; for example, in #1 you might make a table with columns for Brown, Jones, and Smith and rows for cashier, manager, and teller. For the later problems a table will not be sufficient; you'll also have to try various assignments (*e.g.* Could it be that Alice is married to Ed?) and see if you arrive at a contradiction.

1. In a certain bank the positions of cashier, manager, and teller are held by Brown, Jones, and Smith (though not necessarily respectively).

- The teller, who was an only child, earns the least.
- Smith, who married Brown's sister, earns more than the manager.

What position does each man fill?

2. Mr. Carter, Mr. Flynn, Mr. Milne, and Mr. Savage serve the little town of Milford as architect, banker, druggist, and grocer (though not necessarily respectively). Each man's income is a whole number of dollars.

- The druggist earns exactly twice as much as the grocer, the architect earns exactly twice as much as the druggist, and the banker earns exactly twice as much as the architect.
- Although Mr. Carter is older than anyone who makes more money than Mr. Flynn, Mr. Flynn does not make twice as much as Mr. Carter.
- Mr. Savage earns exactly \$3776 more than Mr. Milne.

What is each man's occupation?

3. During the summer in Luncyville the shoe store is closed every Monday, the hardware store is closed every Tuesday, the grocery store is closed every Thursday, and the bank is open only on Monday, Wednesday, and Friday. Everything of course is closed on Sunday. One afternoon Mrs. Abbot, Mrs. Briggs, Mrs. Culver, and Mrs. Denny went shopping together, each with a different place to go. On their way they dropped the following remarks:

Mrs. Abbot: Mrs. Denny and I wanted to go earlier in the week but there wasn't a day when we both could take care of our errands.

Mrs. Briggs: I didn't want to come today but tomorrow I couldn't do what I have to do.

Mrs. Culver: I could have gone yesterday or the day before just as well as today.

Mrs. Denny: Either yesterday or tomorrow would have suited me.

Which place did each woman need to visit in town?

4. Ed, Frank, George, and Harry took their wives to the Barn Dance one Saturday evening not long ago. At one time as a result of exchanging dances Betty was dancing with Ed, Alice was dancing with Carol's husband, Dorothy was dancing with Alice's husband, Frank was dancing with George's wife, and George was dancing with Ed's wife.

What is the name of each man's wife, and with whom was each man dancing?

Answers to last week's puzzles (keys to puzzles are also posted on the class website): (1) Take the chicken and come back; then take the fox and bring the chicken back; then take the grain and come back; then take the chicken. (2) Run and D.M.C. cross and Run comes back; then Jam Master Jay and Norman cross and D.M.C. comes back; then Run and D.M.C. cross.