

**Math 235 Fall 2000**  
**Weekend Puzzles #5**

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 for those of you who said the previous puzzles were too easy. These should keep you busy for a few hours. Both problems are taken from the book *101 Brain Puzzles* by E.R. Emmet. Anyone who submits a correct solution to the second puzzle (on the back of this page) will be entered in a drawing to win a book of puzzles!

**1.** The people at Widgets, Incorporated have always talked about themselves as one big happy family, and in fact that is literally true. Alf, Bert, Charlie, Duggie, Ernie, Fred and George can all be represented on one family tree such that every male who appears on the tree is one of the seven. Their jobs are, not necessarily respectively, Door-Shutter, Door-Opener, Door-Knob-Polisher, Sweeper-Upper, Bottle-Washer, Welfare Officer, and Worker. Except for Charlie, who remains silent, they all make remarks, which are true, as follows:

- Alf:** 1. My brother-in-law is the Welfare Officer.
- Bert:** 1. My father's brother is George's sister's father-in-law.  
2. My brother is the Door-Opener.
- Duggie:** 1. My father is the Bottle-Washer.  
2. Ernie's son is the Door-Shutter.
- Ernie:** 1. Duggie's brother is the Door-Knob-Polisher.  
2. My father is the Worker.
- Fred:** 1. My nephew is the Door-Shutter.
- George:** 1. Bert is the Door-Shutter's cousin.

*Find their jobs and how they are all related to each other.*

*Answers to last week's puzzles (more detailed keys to puzzles are posted on the class website): (1) You should always switch to the other box! (2) An argument can be made for both answers. On the one hand, Mr. Know-it-all has already chosen whether or not to put a million dollars in the second box, so you might as well take both boxes. On the other hand, if Mr. Know-it-all has predicted that you will do this, then he won't put a million dollars in the box!*

**2.** A glorious Saturday in June found the employees from Widgets, Incorporated at the park. Alf, Bert, Charlie, Duggie, Ernie, Fred and George had with them their wives who are called, not respectively, Agnes, Beatrice, Clarissa, Daisy, Emma, Flossie and Geritie.

The wives are wearing, again not respectively, most elegant hats which are florally decorated with Aspidistras, Begonias, Crocuses, Dahlias, Edelweiss, Fuchsias, and Gentians.

Each lady's husband and flower have different initial letters which are not the same as the initial letter of the lady's name.

Each of the 14 people either always tell the truth or never does. Of each married couple one member and one only is a liar.

The men are all speechless with emotion and fatigue and their wives do the talking, as follows:

- Agnes:**
1. When asked whether Gertie was wearing a Fuchsia hat, George said *No*.
  2. When asked whether Ernie's wife was wearing a Begonia hat, Duggie said *Yes*.
  3. When asked whether Beatrice was wearing a Fuchsia hat, Clarissa said *Yes*.

- Beatrice:**
1. Alf is not married to Emma.
  2. When asked whether Fred was married to Gertie, Clarissa's husband said *Yes*.
  3. When asked whether George's wife was wearing a Fuchsia hat, Fred said *Yes*.

- Clarissa:**
1. Daisy is wearing a Begonia hat.
  2. My husband is George.
  3. Emma's husband is a liar.

- Daisy:**
1. When asked whether Duggie was married to Clarissa, Alf said *Yes*.
  2. Ernie is a liar.
  3. Fred's wife is wearing a Crocus hat.

- Emma:**
1. Alf always tells the truth.
  2. Charlie's wife is not wearing an Edelweiss hat.
  3. When asked whether she was Ernie's wife, Clarissa said *No*.

- Flossie:**
1. Duggie's wife is wearing an Aspidistra hat.
  2. When asked whether Daisy was Bert's wife, my husband said *No*.

- Gertie:**
1. When asked whether Flossie was wearing a Begonia hat, Bert said *Yes*.
  2. Bert's wife is wearing an Aspidistra hat.

*Find for each man his wife's name and the floral decoration in her hat, and find which of the 14 tell the truth and which tell lies.*