CS 337   **Pop Quiz 4**   **3/19/03**

Open book and notes.

Problem There is a program, `divide0`, in your notes to partition a list into two nearly equal-sized lists (see section 9.5). The solution uses mutual recursion. Give a solution without using mutual recursion, i.e., define a function `divide` with the same interface which calls only itself.

Solution

```
divide [] = ([],[])
divide [x] = ([x],[])
divide (x:(y:ys)) = (x:f, y:g)
                    where (f,g) = divide ys
```