The if keyword allows you to put these types of decisions into your programs. The decisions are based on a comparison. For example:

- ✔ If the contents of variable *X* are greater than variable *Y,* scream like they're twisting your nose.
- ✔ If the contents of the variable *calories* are very high, it must taste very good.
- ✔ If it ain't broke, don't fix it.
- ✔ If Doug doesn't ask me out to the prom, I'll have to go with Charley.

All these examples show important decisions, similar to those you can make in your C programs by using the if keyword. However, in the C programming language, the if keyword's comparisons are kind of, sort of — dare I say it? — mathematical in nature. Here are more accurate examples:

- ✔ If the value of variable *A* is equal to the value of variable *B*
- ✔ If the contents of variable *ch* are less than 132
- ✔ If the value of variable *zed* is greater than 1,000,000

These examples are really simple, scales-of-justice evaluations of variables and values. The if keyword makes the comparison, and if the comparison is true, your program does a particular set of tasks.

- ✔ if is a keyword in the C programming language. It allows your programs to make decisions.
- ✔ if decides what to do based on a comparison of (usually) two items.
- ✔ The comparison that if makes is mathematical in nature: Are two items equal to, greater than, less than — and so on — to each other? If they are, a certain part of your program runs. If not, that part of the program doesn't run.
- ✔ The if keyword creates what is known as a *selection statement* in the C language. I wrote this topic down in my notes, probably because it's in some other C reference I have read at some time or another. *Selection statement.* Impress your friends with that term if you can remember it. Just throw your nose in the air if they ask what it means. (That's what I do.)

The computer-genie program example

The following program is GENIE1.C, one of many silly computer guess-the-number programs you write when you find out how to program. Computer scientists used to play these games for hours in the early days of the computer. They would probably drop dead if we could beam a Sony PlayStation back through time.