We all know what dates are and what we mean when we say “I need it done in three days,” but such natural expressions are not so easy for computers. Unfortunately, computations that involve time and dates are essential in business and cannot be ignored. Without them it would be very difficult to judge the potential profitability of a planned business venture, the real cost of a loan, or the future value of an investment.

A lot of financial functions greatly benefit from the use of date functions, because they make it possible to automate a lot of time-based calculations. Automating things is always a good idea, because it saves you time and money.

There are two kinds of OpenOffice.org Calc time-related functions: date functions (for bigger chunks of time: days, weeks, months, or years) and time functions (for shorter periods of time: hours, minutes, or seconds). That distinction exists for your own comfort only, because all date and time calculations in OpenOffice.org Calc are based on the same fractional number (a.k.a. “timestamp”) that represents the number of seconds that have elapsed since a subjectively chosen moment in time called an Epoch, which is a fancy way of saying the time counter value was equal to 00:00:00.00 (i.e., zero).

You can set the Epoch yourself (choose Tools ➤ Options and select the Calculate item in the OpenOffice.org Calc branch to display a panel where you can choose one of the three available Epochs) (see the Date section in Figure 12-1).
Figure 12-1. Set the Epoch in the Date section.

Unless you have old documents created well before the year 2000, you should always use the default Epoch of 12/30/1899.

Whichever Epoch you choose, the count starts at midnight. For the standard Epoch, OpenOffice.org Calc can recognize years between 1583 and 9956, or, if you enter them as two-digit years, from 19XX to 20XX–1. If you decide to use the shorter notation, i.e., 12/15/20 instead of 12/15/2020, you will have to tell OpenOffice.org Calc how it should convert two-digit years into four-digit years.

You do this in the Options dialog box in the General branch (choose Tools ➤ Options) as shown in Figure 12-2.

Figure 12-2. Set two-digit years in the Year section.