```
Enter initial value: 0
Enter final value: .5
Enter increment: .1
                cos(x)
      X
   0.00000
               1.00000
               0.99500
   0.10000
               0.98007
   0.20000
               0.95534
   0.30000
   0.40000
               0.92106
   0.50000
               0.87758
                sin(x)
      X
   0.00000
               0.00000
   0.10000
               0.09983
   0.20000
               0.19867
   0.30000
               0.29552
   0.40000
               0.38942
   0.50000
               0.47943
                tan(x)
      \mathbf{x}
  0.00000
               0.00000
  0.10000
               0.10033
  0.20000
               0.20271
  0.30000
               0.30934
  0.40000
               0.42279
  0.50000
```

17.8 **Restricted Pointers (C99)**

0.54630

This section and the next discuss two of C99's pointer-related features. Both are primarily of interest to advanced C programmers; most readers will want to skip these sections.

In C99, the keyword restrict may appear in the declaration of a pointer:

```
int * restrict p;
```

A pointer that's been declared using restrict is called a restricted pointer. The intent is that if p points to an object that is later modified, then that object is not accessed in any way other than through p. (Alternative ways to access the object include having another pointer to the same object or having p point to a named variable.) Having more than one way to access an object is often called aliasing.

Let's look at an example of the kind of behavior that restricted pointers are supposed to discourage. Suppose that p and q have been declared as follows:

```
int * restrict p;
int * restrict q;
```