

with three digits after the decimal point. Since `x` requires only seven characters (three before the decimal point, three after the decimal point, and one for the decimal point itself), three spaces precede `x`.

- `%10.3e` — Displays `x` in exponential form, using 10 characters overall, with three digits after the decimal point. `x` requires nine characters altogether (including the exponent), so one space precedes `x`.
- `%-10g` — Displays `x` in either fixed decimal form or exponential form, using 10 characters overall. In this case, `printf` chose to display `x` in fixed decimal form. The presence of the minus sign forces left justification, so `x` is followed by four spaces.

## Escape Sequences

The `\n` code that we often use in format strings is called an *escape sequence*. Escape sequences enable strings to contain characters that would otherwise cause problems for the compiler, including nonprinting (control) characters and characters that have a special meaning to the compiler (such as `"`). We'll provide a complete list of escape sequences later; for now, here's a sample:

escape sequences ► 7.3

Alert (bell)	<code>\a</code>
Backspace	<code>\b</code>
New line	<code>\n</code>
Horizontal tab	<code>\t</code>

When they appear in `printf` format strings, these escape sequences represent actions to perform upon printing. Printing `\a` causes an audible beep on most machines. Printing `\b` moves the cursor back one position. Printing `\n` advances the cursor to the beginning of the next line. Printing `\t` moves the cursor to the next tab stop.

### Q&A

A string may contain any number of escape sequences. Consider the following `printf` example, in which the format string contains six escape sequences:

```
printf("Item\tUnit\tPurchase\n\tPrice\tDate\n");
```

Executing this statement prints a two-line heading:

```
Item      Unit      Purchase
          Price    Date
```

Another common escape sequence is `\"`, which represents the `"` character. Since the `"` character marks the beginning and end of a string, it can't appear within a string without the use of this escape sequence. Here's an example:

```
printf("\\"Hello!\");
```

This statement produces the following output:

```
"Hello!"
```