

```

int height, length, width, volume, weight;

height = 8;
length = 12;
width = 10;
volume = height * length * width;
weight = (volume + 165) / 166;

printf("Dimensions: %dx%dx%d\n", length, width, height);
printf("Volume (cubic inches): %d\n", volume);
printf("Dimensional weight (pounds): %d\n", weight);

return 0;
}

```

The output of the program is

```

Dimensions: 12x10x8
Volume (cubic inches): 960
Dimensional weight (pounds): 6

```

## Initialization

variable initialization ► 18.5

Some variables are automatically set to zero when a program begins to execute, but most are not. A variable that doesn't have a default value and hasn't yet been assigned a value by the program is said to be *uninitialized*.



Attempting to access the value of an uninitialized variable (for example, by displaying the variable using `printf` or using it in an expression) may yield an unpredictable result such as 2568, -30891, or some equally strange number. With some compilers, worse behavior—even a program crash—may occur.

We can always give a variable an initial value by using assignment, of course. But there's an easier way: put the initial value of the variable in its declaration. For example, we can declare the `height` variable and initialize it in one step:

```
int height = 8;
```

In C jargon, the value 8 is said to be an *initializer*.

Any number of variables can be initialized in the same declaration:

```
int height = 8, length = 12, width = 10;
```

Notice that each variable requires its own initializer. In the following example, the initializer 10 is good only for the variable `width`, not for `height` or `length` (which remain uninitialized):

```
int height, length, width = 10;
```