

34 *A Guide to C Programming*

4. Suppose that `v1`, `v2` and `v3` are three floating-point variables with values 5.0, -4.5, and 11.25, respectively. Write a `printf` statement to display this message:

```
v1 = 5    v2 = -4.5    v3 = 11.25
```

5. Assuming the human heart rate is seventy-five beats per minute, write a program to ask a user their age in years and to calculate the number of beats their heart has made so far in their life.
6. Write a program to accept a temperature in degrees Fahrenheit and convert it to degrees Celsius. Your program should display the following prompt:

Enter a temperature in degrees Fahrenheit:

You will then enter a decimal number followed by the Enter key.
The program will then convert the temperature by using the formula

$$\text{Celsius} = (\text{Fahrenheit} - 32.0) * (5.0 / 9.0)$$

Your program should then display the temperature in degrees Celsius using an appropriate message.

7. Make changes to the program developed in exercise 4 to accept the temperature in degrees Celsius and convert it to degrees Fahrenheit.
8. Write a program to input three floating-point numbers from the keyboard and to calculate
- (a) their sum and
 - (b) their average.

Display the results to three decimal places.

9. Write a program to read in two numbers from the keyboard and to display the result of dividing the second number into the first.

For example, if you input 123 and 12, display the results in the following format:

```
10 Remainder = 3
-----
12 ) 123
```

(Hint: use the modulus operator `%` to get the remainder 3, and use integer division to get the quotient 123.)