2.11 Write Python expressions corresponding to these statements:

(a) The sum of negative integers -7 through -1

(b) The average age of a group of kids at a summer camp given that 17 are 9 years old, 24 are 10 years old, 21 are 11 years old, and 27 are 12 years old

(c) 2 to the power -20

(d) The number of times 61 goes into 4356

(e) The remainder when 4365 is divided by 61

2.14 Start by executing

```
s = 'goodbye'
```

Then write a Boolean expression that checks whether:

(a) The first character of string s is 'g'

(b) The seventh character of s is 'g'

(c) The first two characters of s are 'g' and 'a'

(d) The next to last character of s is ' x'

(e) The middle character of s is 'd'

(f) The first and last characters of strings are equal

(g) The last four characters of string s match the string ' tion'

Note: These seven statements should evaluate to True, False, False, False, True, False, and False, respectively.

2.16 Write the corresponding Python assignment statements:

(a) Assign 6 to variable a and 7 to variable b.

(b) Assign to variable c the average of variables a and b.

(c) Assign to variable inventory the list containing strings 'paper', 'staples'. and 'pencils'.

(d) Assign to variables first, middle and last the strings 'John', 'Fitzgerald', and 'Kennedy' .

(e) Assign to variable fullname the concatenation of string variables first, middle, and last. Make sure you incorporate blank spaces appropriately.

2.17 Using variables defined in Exercise 2.16, write Boolean expressions corresponding to the following logical statements and evaluate the expressions:

(a) The sum of 17 and -9 is less than 10.

(b) The length of list inventory is more than five times the length of string fullname

(c) c is no more than 24.

d) 6.75 is between the values of integers a and b.

(e) The length of string middle is larger than the length of string first and smaller than the length string last.

(f) Either the list inventory is empty or it has more than I 0 objects in it.

2.18 Write Python statements corresponding to the following:

(a) Assign to variable flowers a list containing strings 'rose'. 'bougainvillea', 'yucca', 'marigold', 'daylilly '.and 'lilly of the valley'.

(b) Write a Boolean expression that evaluates to True if string 'potato' is in list flowers, and evaluate the expression.

(c) Assign to list thorny the sublist consisting of the first three objects in list flowers.

(d) Assign to list poisonous the sublist consisting of just the last object of list flowers.

(e) Assign to list dangerous the concatenation of lists thorny and poisonous.

2.22 The range of a list of numbers is the largest difference between any two numbers in the list. Write a Python expression that computes the range of a list of numbers 1st. If the list 1st is, say, [3, 7, -2, 12], the expression should evaluate to 14 (the difference between 12 and -2).

2.28 Write the relevant Python expression or statement, involving a list of numbers lst and using list operators and methods for these specifications:

(a) An expression that evaluates to the index of the middle element of lst

(b) An expression that evaluates to the middle element of 1st

(c) A statement that sorts the list 1st in descending order

(d) A statement that removes the first number of list lst and puts it at the end

Note: If a list has even length, then the middle element is defined to be the rightmost of the two elements in the middle of the list.