The exercises in this chapter are designed to help you develop your analysis skills by providing you with the opportunity to practice breaking small problems down into sequences of steps. In addition, completing these exercises will help you become familiar with Python's syntax. To complete each exercise you should expect to use some or all of these Python features:

- Generate output with `print` statements,
- Read input, including casting that input to the appropriate type,
- Perform calculations involving integers and floating point numbers using Python operators like +, -, *, /, //, %, and **.

1. Create a program that displays your name and complete mailing address formatted in the manner that you would usually see it on the outside of an envelope. Your program does not need to read any input from the user.
2. Write a program that asks the user to enter the width and length of a room. Once the values have been read, your program should compute and display the area of the room. The length and the width will be entered as floating point numbers. Include units in your prompt and output message; either feet or meters, depending on which unit you are more comfortable working with.
3. In many jurisdictions a small deposit is added to drink containers to encourage people to recycle them. In one particular jurisdiction, drink containers holding one liter or less have a $0.10 deposit, and drink containers holding more than one liter have a $0.25 deposit. Write a program that reads the number of containers of each size from the user. Your program should continue by computing and displaying the refund that will be received for returning those containers. Format the output so that it includes a dollar sign and always displays exactly two decimal places.
4. The program that you create for this exercise will begin by reading the cost of a meal ordered at a restaurant from the user. Then your program will compute the tip for the meal. Compute the tip as 10 percent of the meal amount. The output from your program should include the the tip amount, and the grand total for the meal including both the tax and the tip. Format the output so that all of the values are displayed using two decimal places.
5. Write a program that reads a positive integer, n, from the user and then displays the sum of all of the integers from 1 to n. The sum of the first n positive integers can be computed using the formula: `sum = (n(n + 1)) / 2`
6. Create a program that reads two integers, a and b, from the user. Your program should compute and display:

- The sum of a and b
- The difference when b is subtracted from a
- The product of a and b
- The quotient when a is divided by b
- The remainder when a is divided by b
- The result of a^b

7. Many people think about their height in feet and inches, even in some countries that primarily use the metric system. Write a program that reads a number of feet from the user, followed by a number of inches. Once these values are read, your program should compute and display the equivalent number of centimeters.

> Hint: One foot is 12 inches. One inch is 2.54 centimeters.

8. Write a program that begins by reading a radius, r, from the user. The program will continue by computing and displaying the area of a circle with radius r and the volume of a sphere

with radius r. Approximate pi as 3.14159265.

> Hint: The area of a circle is computed using the formula area = πr^2. The volume of a sphere is computed using the formula volume = $4/3\pi r^3$.