

Exercises

4. Draw a flowchart or write pseudocode to represent the logic of a program that allows the user to enter a value. The program divides the value by 2 and outputs the result.
5. Draw a flowchart or write pseudocode to represent the logic of a program that allows the user to enter a value for one edge of a cube. The program calculates the surface area of one side of the cube, the surface area of the cube, and its volume. The program outputs all the results.
6. Draw a flowchart or write pseudocode to represent the logic of a program that allows the user to enter two values. The program outputs the product of the two values.
7. a. Draw a flowchart or write pseudocode to represent the logic of a program that allows the user to enter values for the width and length of a room's floor in feet. The program outputs the area of the floor in square feet.
b. Modify the program that computes floor area to compute and output the number of 6-inch square tiles needed to tile the floor.
8. a. Draw a flowchart or write pseudocode to represent the logic of a program that allows the user to enter values for the width and length of a wall in feet. The program outputs the area of the wall in square feet.
b. Modify the program that computes wall area to allow the user to enter the price of a gallon of paint. Assume that a gallon of paint covers 350 square feet of a wall. The program outputs the number of gallons needed and the cost of the job. (For this exercise, assume that you do not need to account for windows or doors, and that you can purchase partial gallons of paint.)
c. Modify the program that computes paint cost to allow the user to enter the number of doorways that do not have to be painted. Assume that each doorway is 14 square feet. Output the number of gallons needed and the cost of the job.
9. Research current rates of monetary exchange. Draw a flowchart or write pseudocode to represent the logic of a program that allows the user to enter a number of dollars and convert it to Euros and Japanese yen.
10. Draw a flowchart or write pseudocode to represent the logic of a program that allows the user to enter values for a salesperson's base salary, total sales, and commission rate. The program computes and outputs the salesperson's pay by adding the base salary to the product of the total sales and commission rate.