Exercise 1: Tip, Tax, and Total

Write a program that calculates the total amount of a meal purchased at a restaurant. The program should ask the user to enter the charge for the food, then calculate the amounts of a 18 percent tip and 7 percent sales tax. Display each of these amounts and the total.

Exercise 2: Celsius to Fahrenheit Temperature Converter

Write a program that converts Celsius temperatures to Fahrenheit temperatures. The formula is as follows:

The program should ask the user to enter a temperature in Celsius, then display the temperature converted to Fahrenheit.

Exercise 3: Hot Dog Cookout Calculator

Assume hot dogs come in packages of 10, and hot dog buns come in packages of 8. Write a program that calculates the number of packages of hot dogs and the number of packages of hot dog buns needed for a cookout, with the minimum amount of leftovers. The program should ask the user for the number of people attending the cookout and the number of hot dogs each person will be given. The program should display the following details:

- The minimum number of packages of hot dogs required
- The minimum number of packages of hot dog buns required
- The number of hot dogs that will be left over
- The number of hot dog buns that will be left over

Exercise 4: Restaurant Selector

You have a group of friends coming to visit for your high school reunion, and you want to take them out to eat at a local restaurant. You aren't sure if any of them have dietary restrictions, but your restaurant choices are as follows:

- Joe's Gourmet Burgers—Vegetarian: No, Vegan: No, Gluten-Free: No
- Main Street Pizza Company—Vegetarian: Yes, Vegan: No, Gluten-Free: Yes
- Corner Café—Vegetarian: Yes, Vegan: Yes, Gluten-Free: Yes
- Mama's Fine Italian—Vegetarian: Yes, Vegan: No, Gluten-Free: No
- The Chef's Kitchen—Vegetarian: Yes, Vegan: Yes, Gluten-Free: Yes

Write a program that asks whether any members of your party are vegetarian, vegan, or gluten-free, to which then displays only the restaurants to which you may take the group.

Exercise 5: Calories Burned

Running on a treadmill you burn 4.2 calories per minute. Write a program that uses a loop to display the number of calories burned after 10, 15, 20, 25, and 30 minutes.

Exercise 6: Pennies for Pay

Write a program that calculates the amount of money a person would earn over a period of time if his or her salary is one penny the first day, two pennies the second day, and continues to double each day. The program should ask the user for the number of days. Display a table showing what the salary was for each day, then show the total pay at the end of the period. The output should be displayed in a dollar amount, not the number of pennies.