1. For the flowchart in Figure 1
   a. Trace for A=2, B=13, C=15
   b. Trace for A=4, B=12, C=9
   c. Trace for A=1, B=3, C=7
   d. Write the algorithm in Pseudocode

2. For the flowchart in Figure 2
   a. Trace for A=30 B=36
   b. Trace for A=475 B=228
   c. Trace for A=30 B=105
   d. Write the algorithm in Pseudocode
3. Write an algorithm in pseudocode for the procedure: Input the price of an item and find and output the new price if a 10% discount is offered and the tax rate is 5%. (11.2 Example 11.5)

4. Write an algorithm in pseudocode for the procedure: Input a person’s age and bank balance. Add 1 to the person’s age, calculate her interest (r=5.5%) and new bank balance. Output all information. (11.2 Example 11.8)

5. Write an algorithm in pseudocode for the procedure: Input a number N and assign -1, 0, or 1 to another variable, depending on whether the real number is negative, zero or positive.

6. Write an algorithm in pseudocode for the procedure: Input a person’s age and salary. If the age equals 65, then output the age. (11.3 #5 and #17)

7. Write an algorithm in pseudocode for the procedure: Input a person’s age and salary. If the age is over 32, then add $1000 to the salary. Otherwise, subtract $500 from the salary. Finally, output the age and new salary. (11.3 #13 and 25)

8. Write an algorithm in pseudocode for the procedure: Input the length and width of a carpet (feet) and the price per square foot to clean the carpet. Calculate and output the area of the carpet (square feet) and the cost of cleaning the carpet if the cost is double for every square foot past the first 100. (11.3 #15)

9. Use a Do-While structure to write an algorithm in pseudocode for the procedure: Input the number of honor points and credits for 587 students, and calculate and output each student’s grade point average, honor points divided by credits. (11.4 #7)

10. Use a Repeat-Until structure to write an algorithm in pseudocode for the procedure: Find and output the average of three test scores to be inputted for each of 77 students. (11.4 #13)

11. Use a Do-While structure to write an algorithm in pseudocode for the procedure: Convert all whole number Fahrenheit temperatures from 32 to 212 inclusive to Celsius temperatures. \[ C = \frac{5}{9}(F - 32) \] (11.4 #9)

12. Use a Do-While structure to write an algorithm in pseudocode for the procedure: Take the length and width of 43 different rectangles and find and output the area and perimeter of the rectangles. (11.4 example 11.15)

13. Use a Do-While structure to write an algorithm in pseudocode for the procedure: Calculate and output all of the powers of 2 that are less than 1000. (11.4 example 11.6)

14. Write an algorithm in pseudocode for a procedure to input salaries for an unspecified number of employees and find and output the average salary (Example 11.18 in 11.4)

15. Write an algorithm in pseudocode for a procedure to enter 20 student’s test scores and find the highest score. Use a repeat Until structure. (Example 11.21 in 11.4)