Task 1

Step 1: Initialize the variable we will be using in our code, these are x1, y1, x2, y2, side1, side2, and distance.

Step 2: We must prompt the user to input numbers to associate them with our x and y values.

Step 3: After the user has input the coordinate points, we will have the program run an algorithm to calculate the distance of the points, we use the distance formula for this.

Step 4: We make the distance variable equal to the Pythagorean Theorem and have the points as the variables the program just calculated.

Step 5: Display the distance to the user.

Task 2

Step 1: Start by initializing our variables, these will be test score 1, 2 ,3 ,4, and the average test score.

Step 2: We will prompt the user to input the values for the four tests so the next algorithm can calculate their average.

Step 3: We make the average equal to the sum of the inputted scores, divided by four.

Step 4: Finally, display the average of the scores to the user.

Task 3

Step 1: Start with three constant variables, the capacity, cost and profit of a carton of milk.

Step 2: Make four more variables, milk quantity, number of cartons, cost, and profit.

Step 4: Prompt the user to enter the amount of milk and assign that to the quantity.

Step 5: Then have an algorithm that calculates the number of cartons we will need by dividing the quantity by the capacity, it will round the cartons needed if there is an overflow.

Step 6: Display the number of cartons needed:

Step 7: Initialize the cost by setting it to cost per liter times quantity.

Step 8: Display the cost, then formulate the profit by another multiplication formula and display that to the user.