**For the following problems**

* **Identify what the OUTPUT will be and what the INPUT(S) will be, create the algorithms (review PPT slide show Ch 2 for examples)**
* **Flowchart the solutions:**

1. Design a program that displays the following information: (Hint : Prompt for information)

* Name
* Address (City, State and Zip)
* Phone

1. A company has determined that its annual profit is typically 23 percent of the total sales. Design a program that asks the user to enter the projected amount of the total sales and then displays the profit that will be made from that amount. (use .23 to represent the 23%)
2. Design the program that converts Celsius temperatures to Fahrenheit temperatures . The program should ask/prompt the user to enter the temperature in Celsius and then display the converted temperature in Fahrenheit. ( F= 9/5C + 32)

Review the order of precedence for math operators and then calculate the answers for the following :

1. 12 + 6 / 3 \* 2

16

1. 100 - 25 \* 3 MOD 4

98

1. 3 + 2 + 1 – 5 + 4 MOD 2 – 1 / 4 + 6

5.75

1. 4 + 7 \* 2 - 3 \* 6 MOD 4 ^ 2 – 2

4

1. The input will be their name, address, and phone number. The output will be the same.

Algorithm:

Declare variables as string literals

Get Name

Get Address

Get Phone Number

Display Name

Display Address

Display Phone Number

Pseudocode

Declare string name, address, phoneNumber

//Prompt user for their information

Display “What is your name?”

Input name

Display “What is your street address, city state and zipcode?”

Input address

Display “What is your phone number?”

Input phoneNumber

// Display information

Display “Name:” name

Display “Address:” address

Display “Phone:” phoneNumber

End

2. The input will be total sales, and the output will be the projected profit.

Algorithm

Declare Constant for the sales percent

Declare variables

Prompt User to input projected sales

Calculate the profit using the sales percent constant

Pseudocode

Constant real salesPercent=.23

Declare real totalSales, profit

//Prompt user to enter the projected amount of total sales

Display “What is your projected amount of sales this year?”

Input totalSales

//Calculate the annual profit

Set profit=totalSales\*salesPercent

//Show the user their projected annual profit

Display “your total annual profit is projected to be” profit

End

3. The Input will be degrees Celsius, and the output will be degrees Fahrenhiet

Algorithm

Declare variables

Prompt user to input Degrees Celsius

Calculate the conversion of Degrees Celsius to Degrees Fahrenheit

Display the Degrees in Fahrenheit

Pseudocode

Declare real Celsius, Fahrenheit

//Prompt the user to enter the degrees Celsius

Display “What temperature in Celsius would you like to convert?”

Input Celsius

//Calculate the Celsius to Fahrenheit conversion

Set Fahrenheit= 9/5\*Celsius+32

//Display the degrees Fahrenheit

Display “That many degrees Celsius is equal to” Fahrenheit “Degrees Fahrenheit”

End