**Chapter 2 – Homework Assignment #2**

**Algorithm Workbench (Page 75) (1 pt each)**

**None of these questions asked me to display the result. They simply asked me to store it, so that is what I have done.**

**3a**:

Start

Declare Integer A

Declare Integer B

Set A = 0

Set B = 2 + A

Display B

Stop

**3b**

Start

Declare Integer B

Declare Integer A

Set B = 0

Set A = B \* 4

Display A

Stop

**3c**

Start

Declare Integer A

Declare Integer B

Set A

Set B = A / 3.14

Display B

Stop

**3d**

Start

Declare Integer A

Declare Integer B

Set B = 0

Set A = B – 8

Display A

Stop

**4a: result = 12**

**4b: result = 4**

**4c: result = 2**

**4d: result = 6**

**10.**

Start

Declare Integer subtotal

Declare Integer totalFee

Set subtotal = 50

Set totalFee = subtotal \* 0.15

Display totalFee

Stop

**11. Yes, this program should work, assuming you didn’t want result to = (a + b) \* c**

**12. This program should also work, assuming you always want it to display num as 5. If the goal was to get the program to display 99, then no, the program will not work**

**Debugging Exercises (1 pt each)**

**1. First, there are two display statements. This may be intentional, but the main issue is that there are quotes around “favoriteFood” which means that the program will literally display “favoriteFood” instead of the variable favoriteFood.**

**3. low + high / 2 should be (low + high) / 2**

**5. The set sum statement is made before the user can Set the desired values for values 1, 2, and 3**

**7. The program attempts to set a new value for a variable which is declared as a constant, which cannot be changed.**

**Programming Exercises**

**(Submit both the pseudocode & flowchart)**

1. **Personal Information (2 points)**

**Start**

**Declare String Name**

**Declare String Address**

**Declare String TelephoneNum**

**Declare String CollegeMaj**

**Set Name = “Austin”**

**Set Address = “1234 Notmyaddress Way”**

**Set TelephoneNum = “123-4567”**

**Set CollegeMaj = “English”**

**Display Name, Address, TelephoneNum, CollegeMaj**

**Stop**

**4. Total Purchase (4 points)**

**Start**

**Declare Integer Item1**

**Declare Integer Item2**

**Declare Integer Item3**

**Declare Integer Item4**

**Declare Integer Item5**

**Declare Integer Tax**

**Declare Integer subTotal**

**Declare Integer Total**

**Display “Please enter the price of your first item”**

**Input Item1**

**Display “Please enter the price of your second item”**

**Input Item2**

**Display “Please enter the price of your third item”**

**Input Item3**

**Display “Please enter the price of your fourth item”**

**Input Item4**

**Display “Please enter the price of your fifth item”**

**Input Item5**

**Set subTotal = Item1 + Item2 + Item3 + Item4 + Item5**

**Set Tax = subtotal \* .06**

**Set Total = subtotal + Tax**

**Display “Your Subtotal is”, subtotal, “Your Tax is”, Tax, “and your Total is”, Total**

**Stop**

**7. Miles-Per-Gallon (4 points)**

**Start**

**Declare Integer miles**

**Declare Integer gallons**

**Declare Integer mpg**

**Display “Please enter the number of miles driven on your last trip”**

**Input miles**

**Display “Please enter the number of gallons of gasoline used”**

**Input gallons**

**Set mpg = miles / gallons**

**Display “The number of miles / gallon that you were able to travel on your last trip was”, mpg**

**Stop**