Question 1 (TRUE or FALSE)   [8]

State whether the following statements are true or false.

	Statements	Answer
1.1	*iPhoneNumber* is a valid variable name.	
1.2	Integer means positive whole numbers.	
1.3	Cell phone numbers must be stored in integer variables.	
1.4	Spaces are allowed in variable names.	
1.5	A program is a step-by-step instruction set.	
1.6	Multiplication is written as *X* in programming.	
1.7	Given *iNum1 = 2, iNum2 = 5* The statement below will output **2*5=10** *display "iNum1*iNum2=iAns"*	
1.8	On the IPO table, for the columns of input and output, you must always have the variable name and description.	

Question 2 (SHORT ANSWERS)   [7]

2.1	Given values, *iNum1 = 10* and *iNum2 = 3* *iAns* is calculated as *iNum1 + iNum2* What will be the exact output of the following statement? *display "iNum1 + iNum2 = " + iAns* _____ _____ _____	(1)
2.2	What does // mean/signify? _____ _____	(1)
2.3	Write a pseudocode statement(s) to input a number between 1 and 10. Use variable iNum.	(3)

	_____ _____	
2.4	Given *iMark1 = 70, iMark2 = 65* and *iMark3=81* When working out the average of three tests using the formula: **iAvg = iMark1 + iMark2 + iMark3 / 3**, a student got an answer of 162! Correct the formula so it gives the correct answer of 72. _____ _____ _____	**(1)**
2.5	Create a suitable variable to store ID numbers. _____ _____ _____	**(1)**

Question 3   [20]

3.1 A Chemist working for ABC Labs is conducting a number of experiments but finds it tedious to keep manually working out the mass of substances. He knows the density and volume, therefore he can work out the mass for himself. The formula he uses is *mass = density * volume.* You are tasked with creating a program to solve this issue. For now, you must create the IPO table to show what is necessary.   **[4]**

Assume that the numbers are decimals.

Ensure to use proper naming conventions.

Input	Processing	Output

3.2 Complete the following algorithm which will:

Read the amount a customer spent at the bookshop. Then calculate and display the amount of VAT the customer should pay, as well as the total amount (original + VAT) to be paid.   **[3]**

Please note, only write the line number and the corrected statement(s)

```
1    when the user clicks the green flag
2        //Constant value
3        VAT_PERC = 0.15
4
5        // Input
6        ask "What is the amount spent? "
7        enter rSpent
8
9        // Processing
10       rVat =
11       rTotalPay =
12
13       // Output
14       display
15       display
16   end
```

Answer:

_____

_____

_____

_____

_____

_____

_____

_____

_____

3.3 Write an algorithm for a simple car rental system. Prompt the user to input the number of days rented and the daily rate. Then, calculate and display the total rental cost before VAT, the VAT amount (with a VAT rate of 10%), and the total rental cost after VAT.   **[13]**

Example 1:

```
Enter number of days rented: 10
Enter daily rental rate: 120,5
Amount before VAT: R1205.0
VAT amount: R120.5
Amount after VAT: R1325.5
```

Example 2:

```
Enter number of days rented: 7
Enter daily rental rate: 250
Amount before VAT: R1750.0
VAT amount: R175.0
Amount after VAT: R1925.0
```

Answer:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____