**Problem 1 :**

Algorithm :

Step 1: START

Step 2: Get the door number and check the entered number is a two digit number or not.

Step 3: if it is not two digit number then loop untill two digit number is entered.

Step 4: calculate remainder and quotient of door number by 10.

Step 5: Add remainder and quotient and print it as result.

Step 6: END

Flow chart :

START

Read door number

Is two digit?

No

Yes

Read door number

Calculate remainder and quotient and add them and store in sum

Print sum as door number

END

**Problem 2 :**

Algorithm :

Step 1: START

Step 2: Get the date and check the entered number is in range of 1 to 31 or not.

Step 3: if it is not in range then loop untill correst date is entered.

Step 4: check that date is even or odd.

Step 5: If it is even then print even registrations are permited.

Step 6: Else print odd registrations are permited.

Step 7: END

Flow chart :

START

Read date

Is in range of 1 to 31?

Yes

Date is even or odd?

Odd Even

Print odd registrations are permited

Even registrations are permited

END

**Problem 3 :**

Algorithm :

Step 1: START

Step 2: Get the weights of horses and store them in array.

Step 3: Sort the array in descending order.

Step 4: check that first element of array should equal to any other element or not.

Step 5: If yes then print weights are not distinct.

Step 6: Else print maximum weight(first element of array).

Step 7: END

Flow chart :

START

Read weights of horses

Sort weights in descending order

Yes

Maximum weight is equal to another weights?

Yes

print maximum weight

print weights are not distinct

END