**PROBLEM 1: In a bucket, there are balls of four different colours – Red, Green, Blue and**

**Orange. A student can pick up two balls from the bucket. There are some………..**

Input the first ball colour.

**FLOWCHART:**

Print the colour.

Colour=Green

Or

Colour=Orange

Or

Colour =Red

No

Colour=Blue

Yes

If the colour is Orange or Green.

**ALGORITHM:** (As it is given that the box has only 4 colours, namely Red, Green, Orange, Blue.)

End

start

No

Yes

Colour=Green

If the colour is red.

**STEP 1:** Take input as the colour of the ball.

**STEP 2:** Check whether it is red colour If yes colour = Green, and Print colour. Termination the Program.

**STEP 3:** Check whether it is Green, Orange colour If yes colour = Blue, and Print colour. Termination the Program.

**STEP 4:** At last, the first ball colour will be blue itself. So, colour = Green or colour= Red or colour = Orange, and Print colour. Termination the Program.

**PROBLEM 2: Lengths of three sides of a triangle a, b, c are given as input……….**

**ALGORITHM:**

**STEP 1:** Take the input of the sides of the triangle. (a, b, c)

**STEP 2:** Check whether any two sides are equal, if its No print ‘The triangle is scalene triangle.’.

**STEP 3:** if Yes check whether the remaining side is also equal to any of the sides.

**STEP 4:**  If yes then print ‘The triangle is equilateral triangle.’ Else print ‘The triangle is isosceles triangle.’.

**FLOWCHART:**

Check any two sides are equal.

No

Print ‘The triangle is scalene triangle.’

start

Input a, b, c

No

Yes

Print ‘The triangle is isosceles triangle.’

Check other side is equal to any of other sides.

Yes

Print ‘The triangle is equilateral triangle.’

End

**PROBLEM 3:** **Write an algorithm and draw the corresponding flowchart for finding the**

**sum of the following……….**

**ALGORITHM:**

**STEP 1:** Take the input x, n.

**STEP 2:** If n>1,Adding the output coming by substituting x, n in (x^ n)/(n-1)! by decreasing n, until n reaches 2. If n<1, print n<1.

**STEP 3:**  Print the sum.

**FLOWCHART:**

If n>1

Yes

Output+=

( x^ n)/(n-1)!

Input x, n

start

If n-1>1

No

Print n<1

n=n-1

Yes

End

Print output.

No

**PROBLEM 4:** **Write the algorithm and draw the corresponding flowchart for solving the**

**following problem - Playing Snakes and Ladder game.**

**ALGORITHM:**

**STEP 1:** Take input no of players.

**STEP 2:** Creating an array of players.

**STEP 3:** Add the value of position of player, and random value came from a dice.

**STEP 4:** Now check the Addition value with the position of snakes and ladders.

**STEP 5:** If it matcheswith snakes and ladders substrate or Add the value to which they end up respectively.

**STEP 6:** Check the position value whether it is 100 or not**.**

**STEP 7:** If yes terminate and print the winner, else repeat it with another player.

**FLOWCHART:**

Input the no. of players.

Create an array for the position of players.

Start

Print the winner who just completed 100

Check the value of the position of the player is 100 or not.

Do it With another player, If the rotation of players is done, do it from player 1 again

End

No

Yes

Check the position with position of snakes and ladders.

Substrate or add respectively to get to their ending positions.

Add the value of the position and random value from a dice.