Q1. Fill in the blanks.

(1) Algorithms and flowcharts are programming design tools.

(2) An algorithm is a step-by-step procedure to solve a given problem.

(3) A flowchart is a pictorial representation of an algorithm.

(4) A variables can store numeric and string values.

(5) Flowchart makes it easy for the programmer to understand the logic and develop a program in a programming language.

Q2. Match the following details in Column A by writing the correct answer from column B.

Column A	Column B
(1) Input/Output	(c) Parallelogram
(2) Decision	(d) Diamond
(3) Flow of logic	(f) Arrows
(4) Process	(b) Rectangle
(5) Start / Stop	(a) Oval
(6) Connector	(e) Round

Ans: (1) c (2) d (3) f
(4) b (5) a (6) e

03. Write the steps for developing an algorithm.

Ans: a) Description of the problem.
b) Analysing the problem.
c) Developing the algorithm.
d) Improvising the algorithm by adding more details.
e) Assessing the algorithm.

04. Write algorithms for the following.

(1) Find the area of a circle with radius as input by the user.

Ans: Area of a circle with radius as input by the user
1) Start
2) Declare variable r, Area
3) Input r
4) Area = 3.14 x r x r
5) Display Area

(2) Let the user input a number and display whether the number is odd or even.

Ans: 1) Start
2) Declare varible 'A'
3) If 'A' is divisible by 2 then display Even
4) Else Display 'A' is odd
5) Stop.

(3) Display prime numbers till 100.

Ans: 1) Start
2) Declare count
3) Count = 2 to 100

4) Use for loop to repeat the no. from 2 to 100.
5) If count has only 2 factors then display count
6) Stop

(4) Write a program to display the cube of a number.

Ans: 1) Start
2) Declare n, cube
3) Input n
4) cube = n * n * n
5) Display cube
6) Stop.

(5) Display Fibonacci series till 100.

Hint: The first 2 numbers in the series are 0 and 1. The next number in a Fibonacci series will be the total of the previous 2 numbers, i.e., 1 in this case.

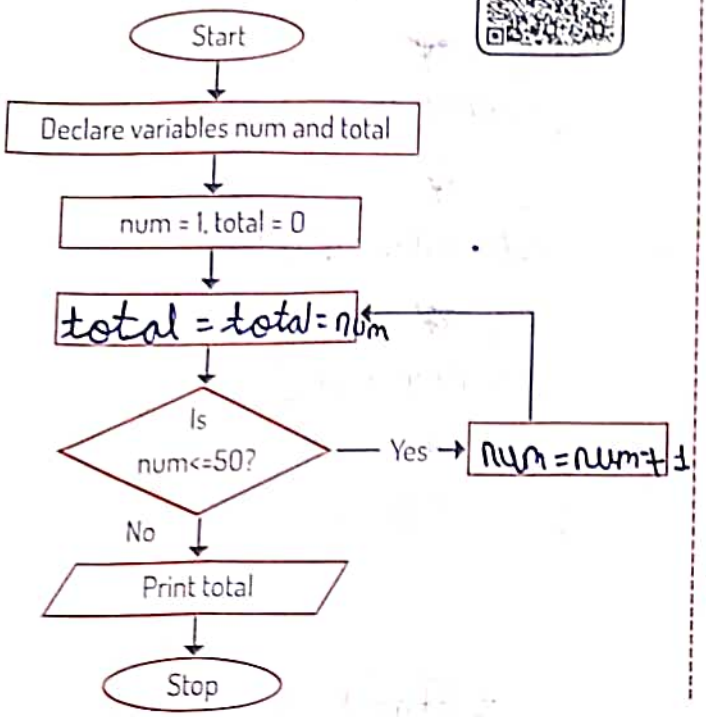
Ans: 1) Start
2) Declare a, b and c
3) Display a = 0, b = 1
4) Do c = a + b
5) While c <= 100
Display c
b = a ; c = b
6) Stop

(6) Input 3 angles of a triangle and using the angle sum property, display whether triangle can be formed with such angles or not.

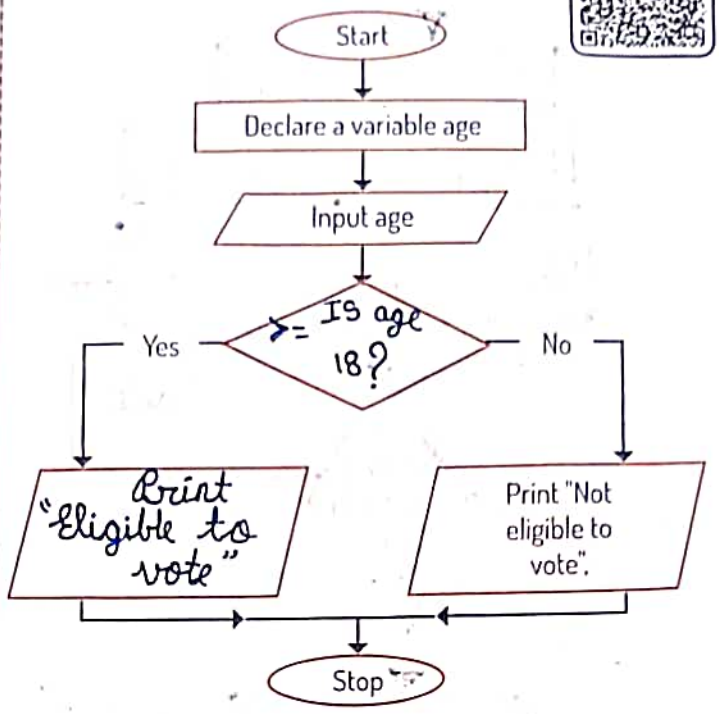
Ans: 1) Start
2) Declare 4 variables a1, a2, a3 and total
3) Input a1, a2 & a3
4) Total = a1 + a2 + a3
5) If total = 180
Display "Traingle is possible"
else
Display "Traingle not possible"
6) Stop.

05. Complete the following flowcharts by writing the missing statements.

(1) Flowchart to find the total of first 50 numbers.

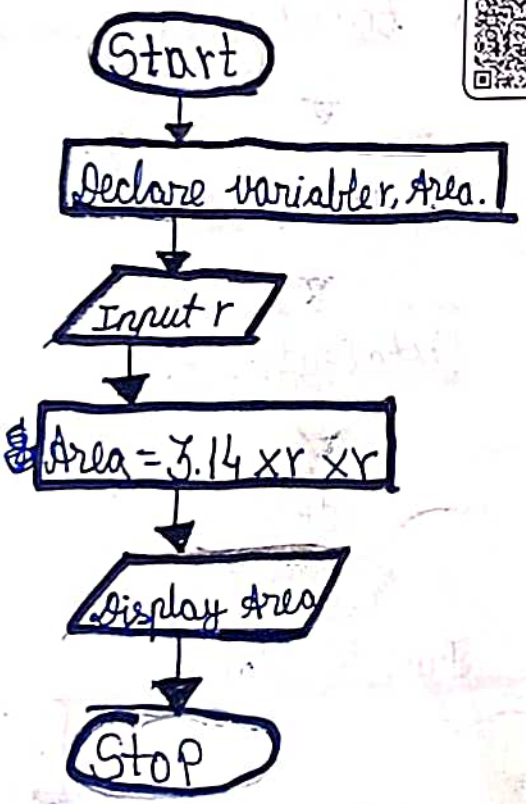


(2) Flowchart to display if a person is eligible to vote.

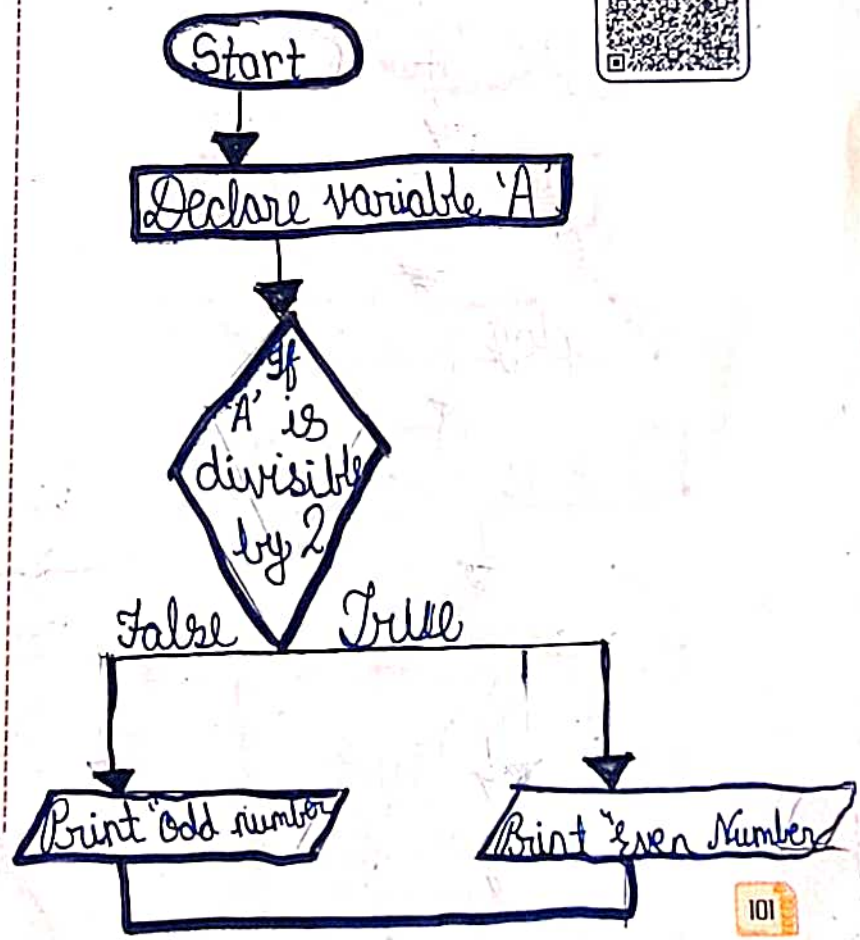


06. Make flowcharts for the algorithms written in question 4.

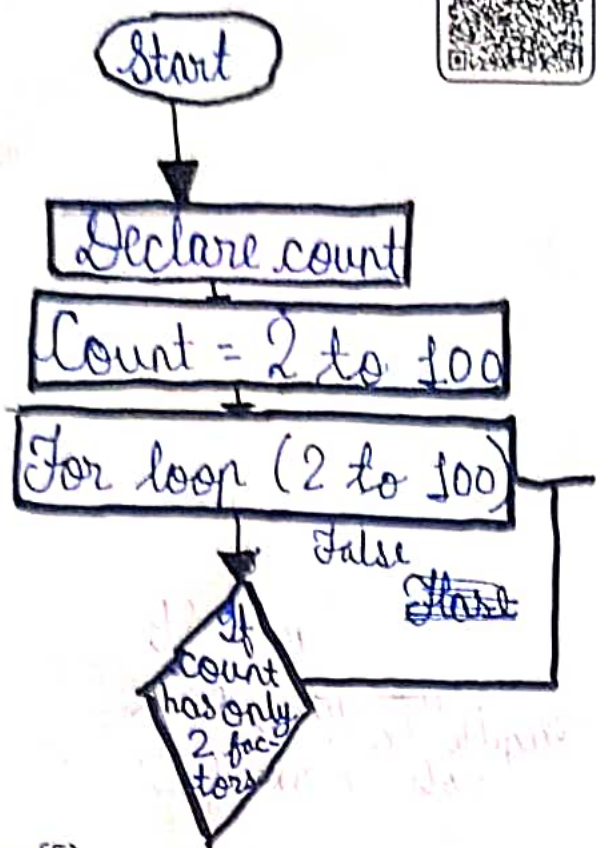
Ans: (1)



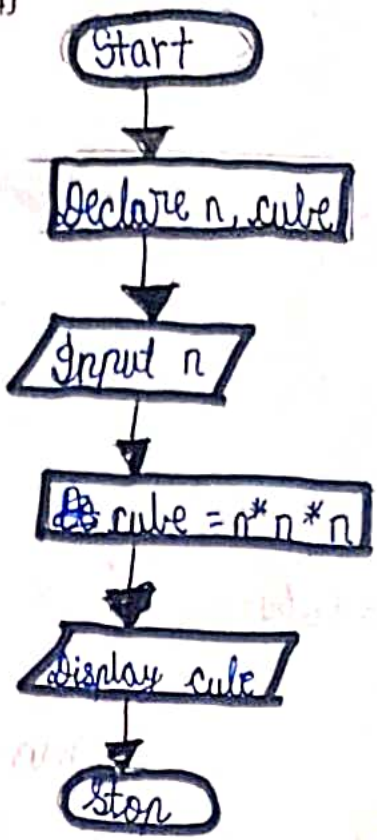
Ans: (2)



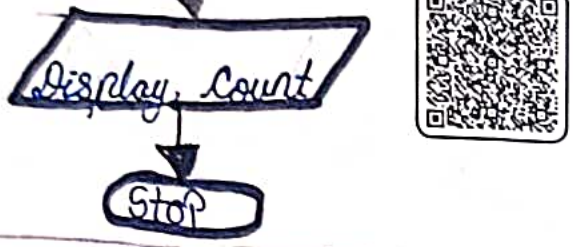
Ans: (3)



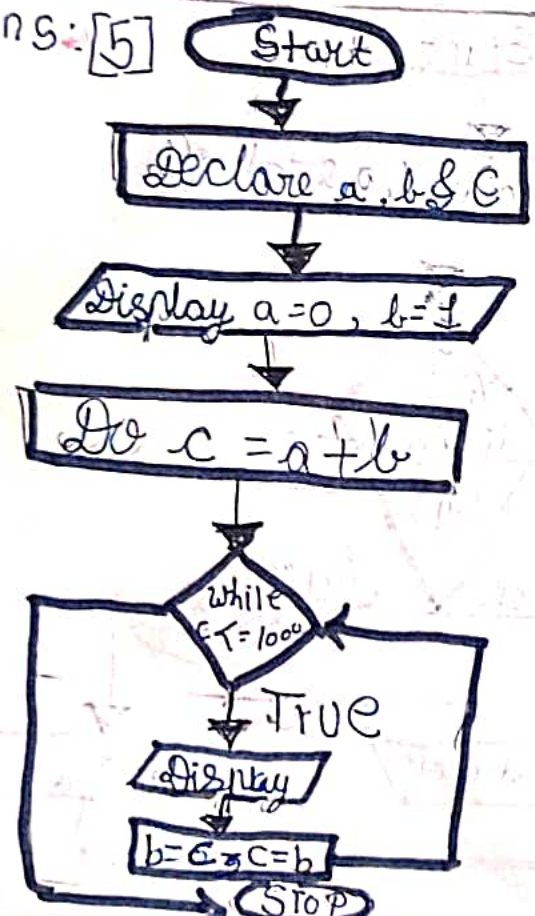
Ans: (4)



Ans: (5)



Ans: [5]



Ans: (6)