Flowchart Question

Question 1　　Area of Circle πr^2

```
( Start )
    |
    v
[ Input r ]
    |
    v
[ Area = 3.14 × r × r ]
    |
    v
[ Print Area ]
    |
    v
( Exit )
```

1. Start
2. Input radius (r)
3. Area = 3.14 × r × r
4. Print Area
5. Exit

Question 2　　Flowchart to find the greatest from 2 numbers

```
( Start )
    |
    v
[ Input a & b ]
    |
    v
< is a > b >
  Yes  No
   |    |
   v    v
[Print a] [Print b]
   |    |
   v    v
  ( Exit )
```

1. Start
2. Input two num a & b.
3. If a > b
      print a
   else
      print b
4. Exit

Question 3 — Even numbers b/w 9 and 100.

```
        ( Start )
           │
           ▼
      ┌─────────┐
      │  i = 10 │
      └─────────┘
           │
           ▼◄──────────────┐
      ┌─────────┐          │
      │ write i │          │
      └─────────┘          │
           │               │
           ▼               │
      ┌─────────┐          │
      │ i = i+2 │          │
      └─────────┘          │
           │               │
           ▼               │
         ╱i<=98╲ ──────────┘
         ╲     ╱
           │
           │ No
           ▼
        ( Exit )
```
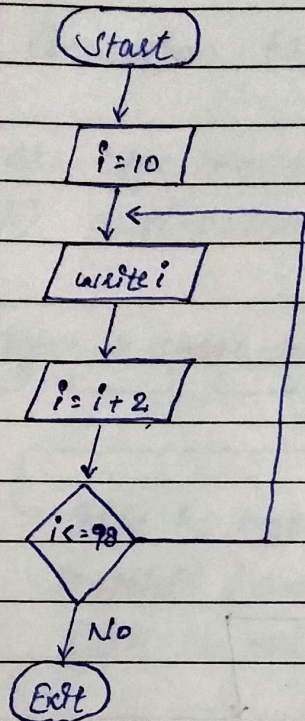
Question 4   Calculate the average from 25 exam scores.

Question 5   Find all roots of a quadratic equations $ax^2 + bx + a = 0$

```
        ( Start )
           |
           v
  ┌─────────────────────────┐
  │ Declare variables a, b   │
  │ D, x1, x2, rp and ip     │
  └─────────────────────────┘
           |
           v
  ┌─────────────────────────┐
  │ Calculate discriment     │
  │ D <- b² - 4ac            │
  └─────────────────────────┘
           |
           v
```

$$D \leftarrow b^2 - 4ac$$

```
  Yes        ◇              No
  <---  is D >= 0  --->
```

| $x_1 = (-b + \sqrt{D})/2a$ |
| $x_2 = (-b + \sqrt{D})/2a$ |

| $ip : -b/2a$ |
| $rp : \sqrt{-D}/2a$ |

| $x_1 = ip + J \times ip$ |
| $x_2 = rp - J \times ip$ |

```
        |       |
        v       v
  ┌──────────────────────┐
  │ Display x1 & x2       │
  └──────────────────────┘
           |
           v
        ( Stop )
```