Questions

1. What is the definition of a problem?
2. How to solve problems?
3. What is meant by Algorithm?
4. What is a Program testing?
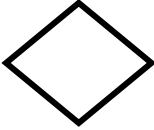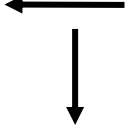5. What is Flowchart?
6. Define Visual Basic.NET?
7. Define programming language?

8. . Complete:

Shapes					
Shapes' name	....	....	**Process**	....	**Flow line**
Function	**Start & End**	**Used to input & output**	....	**Choose events & condition of answer Yes & No**	....

9. . Correct the flowchart which represents adding two numbers:
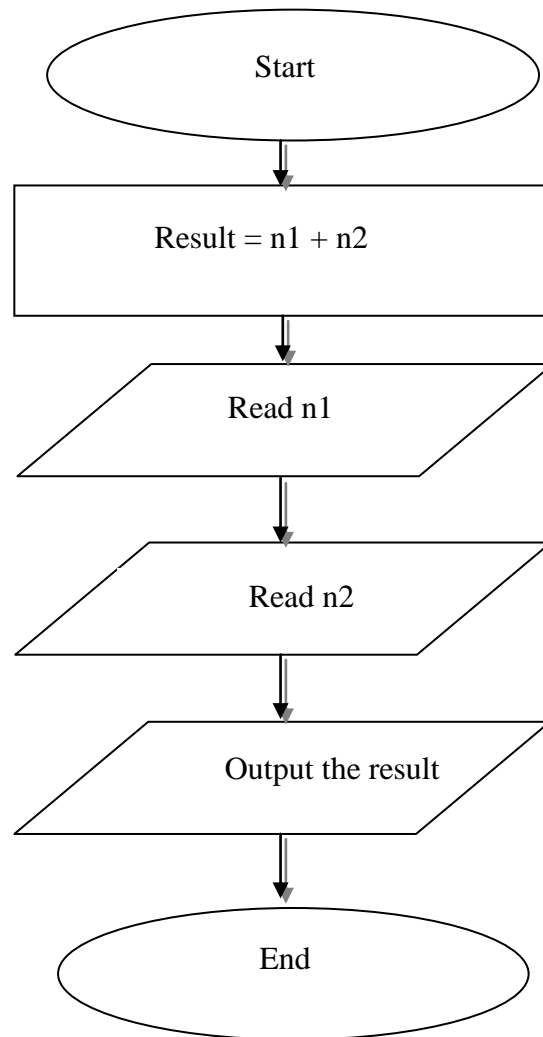
```
        ( Start )
            |
            v
  +----------------------+
  |   Result = n1 + n2   |
  +----------------------+
            |
            v
     /  Read n1  /
            |
            v
     /  Read n2  /
            |
            v
   / Output the result /
            |
            v
        ( End )
```

10. The figure show chart for calculating the area and circumference for a circle given the radius of the circle R:
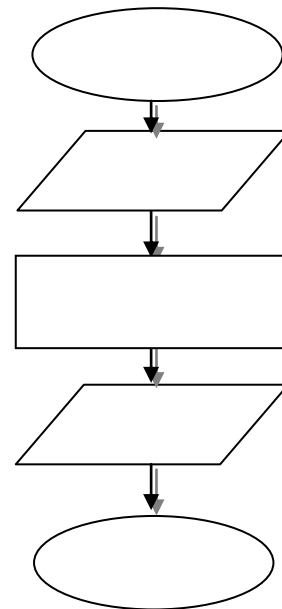
A=3.14*R*R

C=2*3.14*R

START

END

OUTPUT A

OUTPUT C

READ R

11. The figure show chart for calculating the interest value for balance with fixed interest rate.
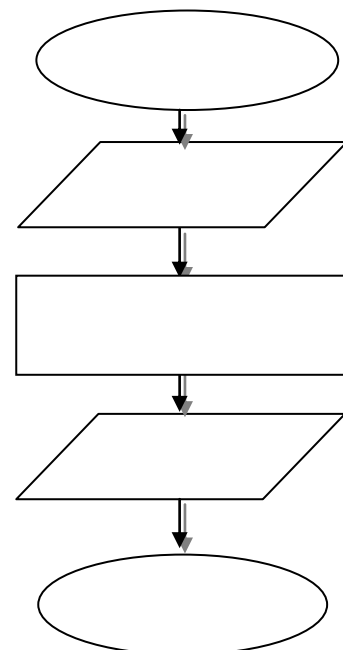
Interest =balance*rate

END

Read name, balance, rate

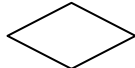Output

Name, balance, interest

Start

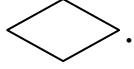12- *- Draw a flowchart for a program that will obtain*

exam scores from the user. Determine whether the score

is greater than or equal 50 and display the message

"ناجح."

13-Make the following statements in order:

(   ) Program Testing.

(   ) Performing step-by-step instructions (Algorithm).

(   ) Problem Definition.

(   ) Program Documentation.

(   ) Program design.

14-State whether the following statements are true (√) or false (X) :

1.Flowcharts use symbols and lines with arrows to represent an Algorithm.   (   )

2.You can use any Geometric shape to represent Algorithms when drawing flowcharts.   (   )

3.Flowcharts can be drawn using software only and can't be drawn
   on paper.   (   )

4.The flow of steps will always be from top to bottom or from left to right.   (   )

5.Therectangle symbol represents only on processing operation.   (   )

6. The flow of steps will always be from top to bottom or from left to right.   (   )

7.The symbol ◇ is used when a question has more than one Alternative.

8.Two paths (lines) should come out from the diamond ◇.   (   )

9. The line with an arrow (flow line) should be from left to right
   or from top to bottom.   (   )

10. The (Algorithm) is the first stage of Problem Solving.   (   )

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Answers

1. What is the definition of a problem?
The problem is defined as the objective or the specific output that we want to attain; through a sequence of steps and activities and, specific input.

2. How to solve problems?
- o Problem Definition.
- o Perform Algorithm.
- o Program design.
- o Program Testing.
- o Program documentation.

3. What is meant by Algorithm?
is defined as group of logically arranged procedures to be executed to attain a goal.(Flow Chart)

4. What is a Program testing?
Detecting errors and correct them.

5. What is Flowchart?
Flowchart is a diagram that uses standard graphical symbol to make the steps required to solve problem.

3rd prep First term
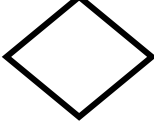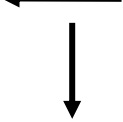
6- visual Basic.net is just one of the languages in visual studio.net package that includes other languages ,such as c# and j#.

7- programming languages is is a set of rules symbols and special words you can use to   write instructions to make a computer program.

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8- Complete:

Shapes	⬭	▱	▭	◇	←↓
Shapes' name	**Terminal**	**Input / output Read / Print**	**Process**	**Decision**	**Flow line**
Function	**Start & End**	**Used to input & output**	**Input the arithmetic process**	**Choose events & condition of answer Yes & No**	**Communica tion lines of the flowchart**

9- Correct the flowchart which represents adding two numbers:
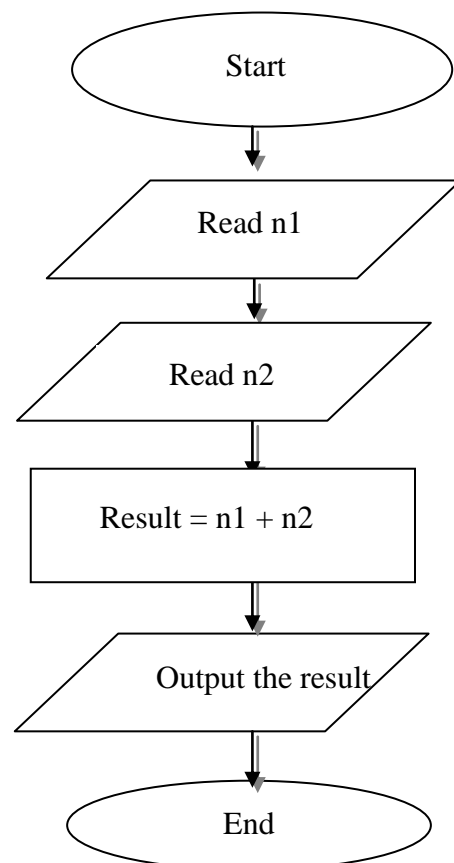
Start

Read n1

Read n2

Result = n1 + n2

Output the result

End

10- The figure show chart for calculating the area and circumference for a circle given the radius of the circle R:
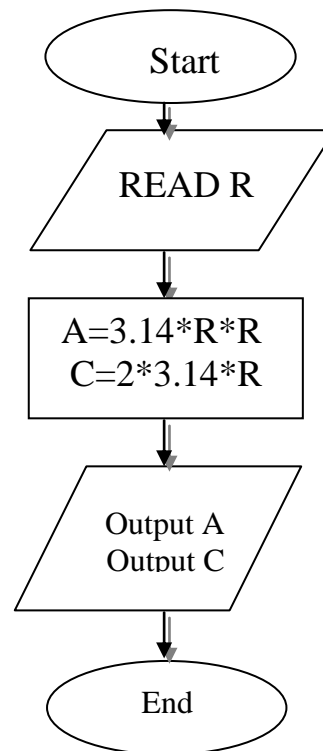
A=3.14*R*R

C=2*3.14*R

START

END

OUTPUT A
OUTPUT C

READ R

11. The figure show chart for calculating the interest value for balance with fixed interest rate.
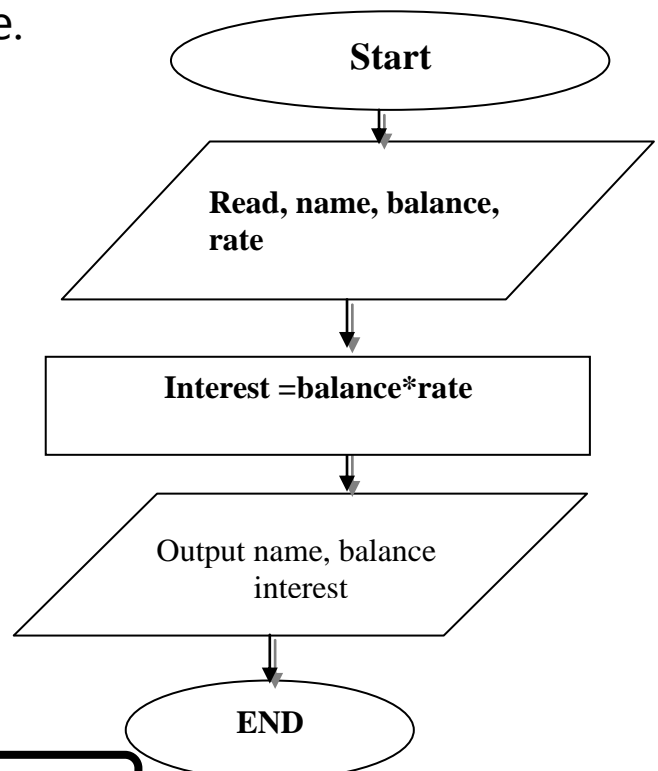
Interest =balance*rate

END

Read name, balance, rate

Output
Name, balance, interest

Start

3rd prep First term

12- - *Draw a flowchart for a program that will obtain exam scores from the user. Determine whether the score is greater than or equal 50 and display the message "ناجح".*

First: Define the Problem.

Output: Print the word "ناجح".

Input: The score X.

Solution: If the value of X is greater than or equal 50; the word "ناجح" will be printed.

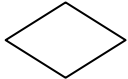| Algorithm	Flowchart
1-Start 2- Enter the values of X 3- If X> =50 then 3-1 Print " ناجح " 4- End	

13-Make the following statements in order:

(4) Program Testing.

(2) Performing step-by-step instructions (Algorithm).

(1) Problem Definition.

(5) Program Documentation.

(3) Program design.

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14-State whether the following statements are true (√) or false (X)

1. Flowcharts use symbols and lines with arrows to represent an Algorithm.   (√)

2. You can use any Geometric shape to represent Algorithms when drawing flowcharts.   (X)

3. Flowcharts can be drawn using software only and can't be drawn on paper.   (X)

4. The symbol ⬯ is used to represent both the start and the end.   (√)

5. The rectangle symbol represents only on processing operation. (X)

6. The flow of steps will always be from top to bottom or from left to right.   (√)

7. The symbol ◇ is used when a question has more than one Alternative.   (√)

8. Two paths (lines) should come out from the diamond ◇.   (√)

9. The line with an arrow (flow line) should be from left to right or from top to bottom .   (X)

10. The (Algorithm) is the first stage of Problem Solving.   (X)

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