

CLASS : VIII

SUBJECT : Computer Science

CHAPTER : Algorithms and Flowcharts (Ch 4)

ANSWER KEY



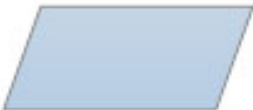
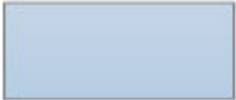

1. A *pseudocode* (false code) is a language similar to English but resembles computer programming code too.
For example, Read A.
2. An algorithm is "rules or procedures" for solving problems and are used in all aspects of daily life activities. Two important aspects of algorithms are that the problem should be expressed in detail and without ambiguity.
3. The rules for writing an algorithm are listed below:-
 - Always begin the first step with START.
 - Always write each step in a separate line and number them.
 - Use the word INPUT or READ when you want an INPUT.
 - Use the word PRINT or WRITE when you want an OUTPUT.
 - Always end with STOP.
 - Do not make the algorithm too long.
4. A flowchart is a diagrammatic representation of an algorithm, in which different steps are shown as symbols of different shapes connected by arrows. The arrows are responsible for the direction of flow of program.

The rules for designing a flowchart are as follows:-

- A flowchart has only one START box and one STOP box.
- The direction of flow in a flowchart is either from top to bottom or from left to right.
- The flow of control follows only one path.

5. A computer uses the IF... ELSE statement for decision-making. When the condition after IF is false, the computer evaluates instruction after ELSE and then proceed further. This process is known as conditional problem solving.

6. *The different shapes used in a flowchart and their functions are listed below:*

Symbol	Name	Function
	Start/end	An oval represents a start or end point
	Arrows	A line is a connector that shows relationships between the representative shapes
	Input/Output	A parallelogram represents input or output
	Process	A rectangle represents a process
	Decision	A diamond indicates a decision

7.

ALGORITHM:-

Step 1: START

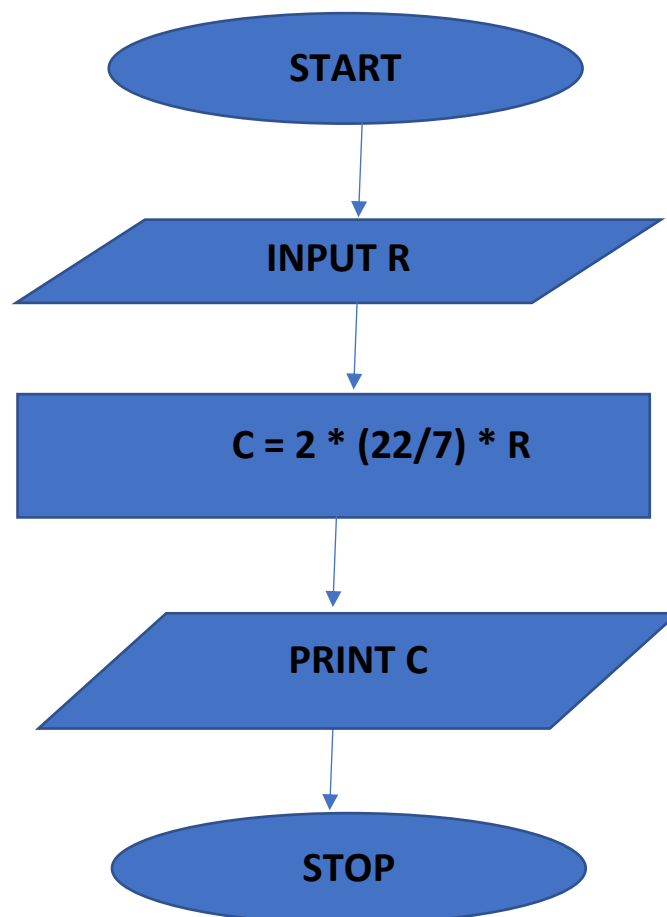
Step 2: INPUT radius of a circle, R

Step 3: Calculate the circumference, $C = 2 * (22/7) * R$

Step 4: PRINT C

Step 5: STOP

FLOWCHART:-



8.

ALGORITHM:-

Step 1: START

Step 2: INPUT A, B

Step 3: IF (A > B)

THEN

PRINT A is greater

ELSE

PRINT B is greater

Step 4: STOP

FLOWCHART:

