

Q1) What is Computational Thinking?

Computational thinking is a way of solving problems step by step, using a computer.

Q2) What are the steps involved in computational thinking?

Steps in Computational Thinking :

1. **Decomposition** – Break a big problem into smaller parts.
2. **Pattern Recognition** – Find similarities or repeated ideas.
3. **Abstraction** – Focus only on the important details, ignore the rest.
4. **Algorithm Design** – Create clear step-by-step instructions to solve the problem.

Q3) What is an Algorithm?

An algorithm is a clear set of step by step instructions to solve a problem listed in a proper order.

Q4) What is a Flowchart?

A flowchart is a diagram that represents a algorithm using different shapes and flowlines or arrows.

Q5) List the shapes of flowchart and what they represent:

Oval (Terminator): Represents the Start or End of a process.

Rectangle (Process): Represents an action, operation, or calculation. It shows a step where something is actively being done.

Diamond (Decision): Represents a checkpoint or question with two or more outcomes (usually Yes/No or True/False). The path taken depends on the answer.

Parallelogram (Input/Output): Represents receiving data or displaying results. Input is getting data from a user or sensor, while Output is presenting data.

Arrows (Flowlines): Connect the symbols to show the direction and sequence of execution from start to finish.

Q6) How to follow a Flowchart?

Start at the top oval labeled "Start."

Follow the arrows line by line to move from shape to shape.

Do what each shape says:

- Parallelogram: Enter or view data.
- Rectangle: Do an action or calculation.
- Diamond: Answer the question (Yes/No) and take that specific path.

Stop at the bottom oval labeled "End."

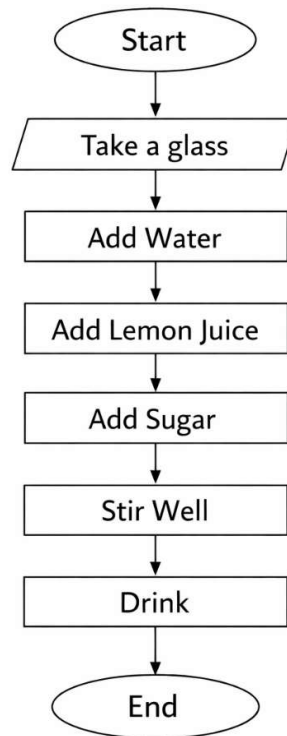
Q7) What is a variable?

A variable is a named storage location in a computer's memory that holds a value or piece of data.

Q6) Please convert the below algorithms into flowcharts:

Algorithm 1: Make a Glass of Lemon Juice

1. Start
2. Take a glass
3. Add water
4. Add lemon juice
5. Add sugar
6. Stir well
7. Drink
8. End



Algorithm 2: Find the Largest of Two Numbers

1. Start
2. Read two numbers (A and B)
3. If $A > B \rightarrow$ Print A is largest
4. Else $\rightarrow$ Print B is largest
5. End

