

## 23. Computers

You have learnt the mathematical operations of addition, subtraction, multiplication and division. You can do sums which involve any one or more of these operations. You may also solve complicated sums which involve all of these operations. You can calculate the answers quickly if you use tables. But sometimes, it is necessary to carry out very complicated calculations that involve very large numbers. At such times, mistakes are bound to occur in the calculations. Then you waste a lot of time checking and rechecking your answers. How can we avoid these errors and wastage of time?

A computer is a machine that is an answer to all these problems. Computers can solve problems and carry out the most difficult calculations with amazing speed and accuracy.



Computers can do several other things besides carrying out calculations. In fact, there are few things that a modern computer is not able to do.

Computers have memory. That is, they can store a lot of data or information. They can keep words, pictures and sounds in their memory and give you the information within a fraction of a second when you need it.

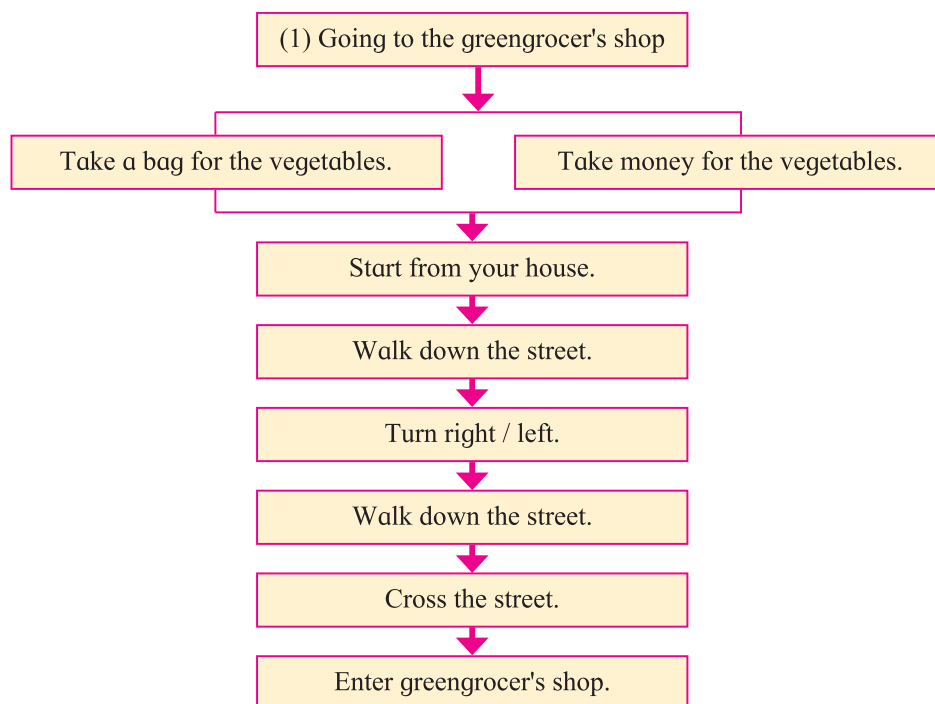
Computers can process the data or the information according to the instructions given to them. A modern computer can follow thousands of instructions within a fraction of a second. Only, the instructions have to be given in a language that the computer understands. A set of code instructions written for a computer is known as a program. Writing a computer program is a specialized task.

A computer on its own does not make judgements about the instructions given to it. It follows the instructions blindly. That is why, the instructions have to be written very very carefully. The instructions must cover every step involved in an operation. If you miss a step, the computer will not correct it.

One has to think carefully to imagine every step involved in any task. Let us see if we can imagine all the steps involved in a simple task. Suppose mother has asked you to buy vegetables. You have to divide this task into smaller ones –

- (1) Going to the greengrocer's shop,
- (2) Picking up the vegetables you want and paying for them,
- (3) Coming back home.

Then you have to subdivide these tasks into still smaller ones. For example -



Each of these smaller tasks can again be divided further into even smaller tasks. Try to do that choosing any one of the above steps.

Thus, we see that computers are smarter than men, but it is men who do the difficult job of making them smart enough.

So the next time you play a game on a computer, or watch a video or obtain some information, think of the men who put in so many efforts to make it all possible.

**Things to do :**

1. Read the sentence and choose the correct alternative.
  - (a) Mistakes are bound to occur.
    - (i) There are no mistakes.
    - (ii) There are some mistakes.
    - (iii) All mistakes are tied together.
  - (b) There are few things that a modern computer is not able to do.
    - (i) A modern computer can do a few things.
    - (ii) A modern computer cannot do a few things.
    - (iii) A modern computer can do almost everything.
2. List the mathematical operations mentioned in the passage.  
Using your mathematics textbook, write one example of each operation.
3. Do you make mistakes in your calculations ?  
What do you do to correct them ?
4. What do you do to remember the information you have gathered ?
5. Choose any home assignment you have been given.  
Write a detailed set of instructions for completing that assignment.
6. List all the words related to computers that you find in this passage.  
Find and add more words to the list.

