



F1.1 What a program is

Programming basics · GCSE · OCR J277 2.2.1, AQA 8525 3.2.2, Edexcel
1CP2 6.2.2 · about 10 min

Name _____

Class _____

Date _____

What this lesson is about

Instructions, one at a time, top to bottom. Running code and reading what comes back.

- A program is a list of instructions
- The first two lines
- One at a time, top to bottom
- Instructions can change the world
- Running again
- What you know now

Questions

7 marks in all

1. In what order does Python carry out the lines of a program?

[1 mark]

- ☐ A Top to bottom, one at a time
- ☐ B Shortest line first
- ☐ C All at the same time
- ☐ D In any order it likes

2. What does this program print?

[1 mark]

```
print("start")
print("end")
print("middle")
```

3. What does `from bugbot import *` do?

[1 mark]

- ☐ A Brings in the robot's commands, such as forward and stop
- ☐ B Connects to the robot
- ☐ C Makes the robot start moving
- ☐ D Prints the word bugbot

4. A program prints "moving", then calls `forward(50)`, `wait(1)` and `stop()`, then prints "stopped".
When does "stopped" appear?

[1 mark]

- ☐ A After the robot has stopped
- ☐ B Before the robot moves
- ☐ C At the same time as "moving"
- ☐ D It never appears

5. You press Run a second time. Where does the program start? [1 mark]
- ☐ A From the first line again
 - ☐ B From where it stopped last time
 - ☐ C From the last line
 - ☐ D It remembers and skips the lines it already ran
6. Which of these instructions make the robot do something, rather than just print? [1 mark]
- Tick every answer that is true.
- ☐ A `forward(50)`
 - ☐ B `stop()`
 - ☐ C `print("hello")`
 - ☐ D `wait(1)`
7. What is the difference between an algorithm and a program? [1 mark]
- ☐ A A program is an algorithm written in a language a computer can run
 - ☐ B They are two words for exactly the same thing
 - ☐ C An algorithm always runs faster
 - ☐ D A program is only for robots

The task: your first program

Make the robot print three lines. One of them must be exactly `I am a BugBot`. The robot should not drive.

```
# the two lines every program starts with: the commands, then the robot
from bugbot import *
connect()

print("...")
```

Plan your program here, then type it in and press Run.



Do it on the robot

www.bugbotlab.com/learn/f1-1-what-a-program-is/

The simulator checks it and tells you when it passes. Nothing to install, no account.

Challenges

1. Print five lines that tell a very short story.

2. Make the robot say "go" before it moves and "stop" after it stops.
3. What happens if you put a `print` line **before** the first line? Try it and read what the robot says.