



F2.1 Blocks and indentation

Decisions and loops · GCSE · OCR J277 2.2.1, AQA 8525 3.2.2, Edexcel

1CP2 6.2.1 · about 10 min

Name _____

Class _____

Date _____

What this lesson is about

How Python groups lines: the colon and the indent.

- A block is a group of lines
- The colon and the indent go together
- How much to indent
- Where a block ends
- Blocks inside blocks
- Why Python does it this way

Questions

7 marks in all

1. What does this program print?

[1 mark]

```
if True:
    print("one")
    print("two")
print("three")
```

2. What must a line that starts a block end with?

[1 mark]

- ☐ A A colon :
- ☐ B A semicolon ;
- ☐ C A full stop
- ☐ D Brackets ()

3. What does Python say about a line indented for no reason, with no : line above it?

[1 mark]

- ☐ A IndentationError: unexpected indent
- ☐ B Nothing, it runs normally
- ☐ C NameError
- ☐ D It skips the line

4. Two lines in the same block are indented by four spaces and three spaces. What happens?

[1 mark]

- ☐ A IndentationError: lines in one block must line up exactly
- ☐ B Both run
- ☐ C Only the first runs
- ☐ D Python fixes it

5. How many spaces is the usual indent for a block inside a block?

[1 mark]

6. Where does a block end?

[1 mark]

- ☐ A At the first line that is indented less
- ☐ B At the next blank line
- ☐ C At the next print
- ☐ D At the end of the program, always

7. In OCR's Exam Reference Language, which word closes an if block?

[1 mark]

- ☐ A endif
- ☐ B end
- ☐ C fi
- ☐ D Nothing: indentation is enough

The task: fix the indentation

This program's lines are in the right order but the indentation is wrong. It should print `inside the block`, then leave the LED green, then print `after the block` once. Fix only the spaces.

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

if True:
print("inside the block")
# the LED: green
led("green")
    print("after the block")
```

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



Do it on the robot

www.bugbotlab.com/learn/f2-1-blocks-and-indentation/

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

Challenges

1. Write a block inside a block inside a block, printing a line at each level.
2. Indent the first line of a program by one space. What does Python say?
3. Change the last cell so that "no block" is inside the outer block instead. What changes in the output?