



F10.1 What is a network?

Networks · GCSE · OCR J277 1.3.1, AQA 8525 3.5, Edexcel 1CP2 4.1.1 ·
about 15 min

Name _____

Class _____

Date _____

What this lesson is about

Why networks, LAN, WAN and PAN, client-server and peer-to-peer.

- Why connect computers?
- Client-server and peer-to-peer
- LAN, WAN and PAN
- Who is on the network?

Questions

6 marks in all

- Which is a characteristic of a LAN? [1 mark]
 - ☐ A It covers a small area and the hardware is owned by the organisation
 - ☐ B It covers a country and uses rented connections
 - ☐ C It always uses wireless connections
 - ☐ D It needs the internet to work
- What is the biggest WAN? [1 mark]
 - ☐ A The internet
 - ☐ B A school network
 - ☐ C A Bluetooth headset
 - ☐ D A home Wi-Fi network
- Which is a disadvantage of a network? [1 mark]
 - ☐ A Malware can spread from one computer to others
 - ☐ B Files can be shared
 - ☐ C Printers can be shared
 - ☐ D Backups can be made centrally
- In a client-server network, what does a server do? [1 mark]
 - ☐ A Provides a service, such as files or web pages, that clients request
 - ☐ B Asks other computers for files
 - ☐ C Only connects devices together
 - ☐ D Shares its files equally with every other device
- Which is an advantage of peer-to-peer over client-server? [1 mark]
 - ☐ A It is cheap and easy to set up, with no server needed
 - ☐ B Backups are made in one place
 - ☐ C Security is managed centrally
 - ☐ D It is easier to manage as it grows

6. A phone, earbuds and a smartwatch connected by Bluetooth form which kind of network?

[1 mark]

- ☐ A PAN
- ☐ B LAN
- ☐ C WAN
- ☐ D Client-server

The task: roll call

Send `who is on the network?`. Listen for 1.5 seconds and, for each reply, print `found <name>` using the name the reply gives after `here:`. Then print `devices on the network: <n>`, counting the devices you found.

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

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



Do it on the robot

www.bugbotlab.com/learn/f10-1-what-is-a-network/

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

Challenges

1. Print the devices in alphabetical order.
2. Ask twice, a second apart, and only count each device once.
3. Is your school's network client-server or peer-to-peer? Give two pieces of evidence.