



## Hardware

### Exercise Sheet

Exercise 1: Name two components of a computer system that are found inside the system unit (i.e. inside the case).

Any two of:

Motherboard, power supply, CPU, expansion card, fan, optical drive,  
HDD, SSD, RAM

Exercise 2: What component is the CPU plugged in to?

Motherboard

Exercise 3: What is the unit of measurement typically used to specify the speed of the CPU?

Hertz (Hz)

Exercise 4: If a new computer took 4 minutes to perform a complex calculation today, how long would we estimate (using Moore's Law) a new computer would take to complete the calculation in 3 years time?

① Years to months

$$3 \times 12 =$$

36 months

② Number of 18m periods

$$36 \div 18 = 2$$

③ Final time

$$4 \div 2 = 2$$

$$2 \div 2 = \underline{\underline{1 \text{ min}}}$$

Exercise 5: What is the unit of measurement typically used to specify the size of the RAM?

Bytes

Exercise 6: Explain the difference between primary memory and secondary storage.

Primary memory (eg. RAM) is used to store data so that it can be quickly accessed by the CPU. Secondary memory is used to store data that needs to be accessed over time.

Exercise 7: What does a RAID do?

A RAID is used to create a pool of HDDs / SSDs in order to provide better storage capacity and improved reliability.

Exercise 8: Give two examples of input devices and two examples of output devices

Input = keyboard, mouse, microphone, webcam, touchscreen

Output = monitor, printer, speaker,

Note: this is not a complete list of input & output devices!

Exercise 9: What is a peripheral device?

A device that is located outside the computer and is connected to the computer via a port or wirelessly (eg. keyboard, monitor)