



4.5.3 Units of Information

1) State what is meant by the term **bit** and the term **byte**.

[2 marks]

2) A computer has 4 gibibytes of memory installed. How many kibibytes is this equivalent to?

[1 mark]

3) Explain the difference between a kilobyte and a kibibyte.

[1 mark]

4) State how many mebibytes are in 1 gibibyte.

[1 mark]

5) A file takes up 5,000,000 bytes. How many megabytes in this?

[1 mark]

6) A USB drive has a memory capacity of 16GiB. If a song is 5MiB, how many songs can the drive hold?

[2 marks]





- 7) A computer has 8 gibibytes of RAM. A program requires 2,097,152 kibibytes. Will this program fit into the RAM?

[2 marks]

- 8) Why do computer scientists prefer to use binary prefixes (KiB, MiB, GiB) over decimal prefixes (kB, MB, GB) when calculating memory size.

[1 mark]

- 9) A storage device is advertised as having a capacity of 64GB. A program reports the same device capacity in GiB. Explain why the reported value in GiB is lower than 64 and calculate the capacity to the nearest whole GiB.

[3 marks]

