

GCSE COMPUTER SCIENCE

GCSE (8520)

UNIT 3.3



3.3 Units of information

Content	Additional information
Know that: <ul style="list-style-type: none"> • a bit is the fundamental unit of information • a byte is a group of 8 bits. 	A bit is either a 0 or a 1. <ul style="list-style-type: none"> • b represents bit • B represents byte
Know that quantities of bytes can be described using prefixes. Know the names, symbols and corresponding values for the decimal prefixes: <ul style="list-style-type: none"> • kilo, 1 kB is 1,000 bytes • mega, 1 MB is 1,000 kilobytes • giga, 1 GB is 1,000 Megabytes • tera, 1 TB is 1,000 Gigabytes. 	Students might benefit from knowing that historically the terms kilobyte, megabyte, etc have often been used to represent powers of 2. The SI units of kilo, mega and so forth refer to values based on powers of 10. When referring to powers of 2 the terms kibi, mebi and so forth would normally be used but students do not need to know these.

SPECIMEN MATERIAL 2015

0 8 Bob purchases a 4GB SD card for use as secondary storage in his phone.

0 8 . 1 Calculate how many megabytes there are in 4GB. Show your working.

[2 marks]

SPECIMEN PAPER 1 SUPPLEMENTAL MATERIAL 2015

1 (d) Place the following quantities in order of size (1 – 4, where 1 is the smallest and 4 is the largest).

Quantity	Order (1 – 4)
15 bits	
3 nibbles	
2 bytes	
1 kilobyte	

[3 marks]

PAPER 2 JUNE 2018

0 3

Put the following capacities into size order (where 1 is the smallest and 4 is the largest).

[3 marks]

Capacity	Order (1-4)
0.5 Terabytes	
3500 Kilobytes	
2.5 Gigabytes	
6250 Megabytes	

PAPER 2 2019

0 2 . 1

What is the largest decimal number that can be represented using 5 bits?

[1 mark]

0 2 . 2

How many bits are there in 3 MB?

Show your working.

[2 marks]

Answer _____