

01 Convert the decimal number 99 into binary. Write your answer as an 8-bit binary number.

[1 mark]

01100011

02.1 How many megabytes are there in 3 terabytes? Show your working.

[2 marks]

3 TB = 3 x 1000 GB = 3000 GB [1 mark for multiplying by 1000 somewhere]

3000 Gb = 3000 x 1000 MB = 3,000,000 MB [1 mark for correct answer]

03.1 Add together the following three binary numbers and give your answer in 8 bit binary

[2 marks]

$$\begin{array}{r} 00100010 \\ 01000011 \\ + 00100100 \\ \hline \end{array}$$

10001001

[1 mark for 1000 in left half/1 mark for 1001 in right half]

03.2 Add together the following three binary numbers and give your answer in 8 bit binary

[2 marks]

$$\begin{array}{r} 00100010 \\ 10100010 \\ + 00101101 \\ \hline \end{array}$$

11110001

[1 mark for 1111 in left half/1 mark for 0001 in right half]

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03.3 Add together the following three binary numbers and give your answer in 8 bit binary

[2 marks]

$$\begin{array}{r} 10010111 \\ 01001011 \\ + 00001101 \\ \hline \end{array}$$

11101111

[1 mark for 1110 in left half/1 mark for 1111 in right half]