01.1 Convert the decimal number 87 into binary. Write your answer as an 8-bit binary value.

[1 mark]

……..

01.2 Convert the hexadecimal number CE into binary. You should show your working.

[2 marks]

……..

Answer: ……..

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

[2 marks]

```
  00010011
  10001001
+ 00010001
```

……..

03 Place the following quantities in order of size (1 – 3, where 1 is the largest and 3 is the smallest)

[2 marks]

Number	**Order (1 – 3)**
Decimal number `12`	
Binary number `1110`	
Hexadecimal number D	

04.1 What is the minimum number of bits needed to be able to represent any character from a character set that contains only the 26 lower-case letters of the alphabet?

[1 mark]

……..

……..

04.2 What is the minimum number of bits needed to store any integer between 0 and 255?

[1 mark]

……..

04.3 How many bits does ASCII code use to represent a individual character?

[1 mark]

……..