01.1 Convert the decimal number 198 into hexadecimal.

[2 marks]

……………………………………………………………………………………………………..

Answer: …………………………………..

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

[2 marks]

```
  00001011
  01001010
+ 00010001
```

……………………………………………………………………………………………………..

01.3 What binary shift can be used to **quadruple** the value of a binary number?

[2 marks]

……………………………………………………………………………………………………..

01.4 The Lithuanian alphabet has **32** characters. What is the minimum number of bits needed to be able to represent any character from the Lithuanian alphabet?

[1 mark]

……………………………………………………………………………………………………..

02.1 A bitmap image is represented as a grid of pixels. State what is meant by the term pixel.

[1 mark]

……………………………………………………………………………………………………..

02.2 State the maximum number of different colours that can be used if a bitmap image has a colour depth of **six** bits.

[1 mark]

……………………………………………………………………………………………………..

02.3 What is the minimum file size for an 800 pixel by 1000 pixel bitmap image that uses 20 different colours? You should give your answer in **kilobytes**. You should show your working.

[3 marks]

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