1. Calculate the binary addition of these two 8-bit (unsigned) binary numbers.

Show your working.

$$00110110$$
$$10011001 +$$

[2]

2. Calculate the addition of these two 8-bit (unsigned) binary numbers.

Show your working.

$$11011011$$
$$10011011 +$$

[2]

3. Calculate the addition of the following two 8-bit binary numbers.

You must show your working.

$$10101010$$
$$00111100 +$$

4. Complete the following binary addition. Show your working.

$$01001001$$
$$11011101 +$$

[2]

5. Complete the following binary addition. Show your working.

$$11101110$$
$$10101010 +$$

[2]

Mark scheme

Question			Answer/Indicative content	Marks	Guidance
1			1 mark per bullet to max 2: • 1100 1111 • Correct working out/ 2 carries shown	2	
			Total	**2**	
2			1 mark per bullet up to a maximum of 2 marks, e.g: • (1) 01110110 • suitable working out with 4 carries	2	
			Total	**2**	
3			1 mark per bullet up to a maximum of 2 marks, e.g: • 1110 0110 • Suitable working out with 3 carries	2	
			Total	**2**	
4			1 mark per bullet up to a maximum of 2 marks, e.g: • (1)0010 0110 • Suitable working out with 4 carries	2	
			Total	**2**	
5			1 mark per bullet up to a maximum of 2 marks, e.g: • (1)1001 1000 • Suitable working out with 5 carries		