

## Unit 2.6 Data Representation

### Lesson 1 - Numbers

## MCQS

The numbers after the question are an approximate estimation of relative difficulty, broadly based around the new GCSE Numbering System. Please note that these were produced before final guidance was released regarding levels of difficulty and as such should be used as a rough guide only.

<b>Question 1: What numeric base does Binary operate on? (1-4)</b>		✓
2		
1		
8		
16		
<b>Question 2: How many bits are there in a byte? (1-4)</b>		✓
8		
16		
1		
2		
<b>Question 3: What is the maximum number of bits needed to represent 15 in denary? (3-5)</b>		✓
6		
4		
<b>Question 4: What is the 8 bit binary representation of 17? (5-7)</b>		✓
00010010		
00010001		
00001101		
00100010		
<b>Question 5: What is the binary representation of 32? (5-7)</b>		✓
00100000		
00100100		
00110000		
00100001		
<b>Question 6: Question 6: What is the Denary representation of this 8 bit number? 01001111 (5-7)</b>		✓
59		
79		
69		
49		
<b>Question 7: Question 7: What is the Denary representation of this 8 bit number? 11010101 (5-7)</b>		✓
199		
206		
228		
213		

## MCQS

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<b>Question 8: How Bytes are there in a Terabyte? (5-7)</b>	✓
1024 Kilobytes	
1024 Megabytes	
1024 Gigabytes	
<b>Question 9: Why do we use the binary number system in Computing? (4-6)</b>	✓
Because a CPU has two transistors	
To represent the two different states of transistors	
To allow the CPU to be in one of two states	
<b>Question 10: What is the hex number 6B in binary? (6-8)</b>	✓
01101011	
10101110	
01110111	

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### Lesson 1 - Numbers

## MCQS ANSWERS

<b>Question 1: What numeric base does Binary operate on? (1-4)</b>	✓
2	✓
1	
8	
16	
<b>Question 2: How many bits are there in a byte? (1-4)</b>	✓
8	✓
16	
1	
2	
<b>Question 3: What is the maximum number of bits needed to represent 15 in denary? (3-5)</b>	✓
6	
4	✓
<b>Question 4: What is the 8 bit binary representation of 17? (5-7)</b>	✓
00010010	
00010001	✓
00001101	
00100010	
<b>Question 5: What is the binary representation of 32? (5-7)</b>	✓
00100000	✓
00100100	
00110000	
00100001	
<b>Question 6: Question 6: What is the Denary representation of this 8 bit number? 01001111 (5-7)</b>	✓
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<b>Question 7: Question 7: What is the Denary representation of this 8 bit number? 11010101 (5-7)</b>	✓
199	
206	
228	
213	✓

**MCQS ANSWERS**

<b>Question 8: How Bytes are there in a Terabyte? (5-7)</b>	✓
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1024 Megabytes	
1024 Gigabytes	✓
<b>Question 9: Why do we use the binary number system in Computing? (4-6)</b>	✓
Because a CPU has two transistors	
To represent the two different states of transistors	✓
To allow the CPU to be in one of two states	
<b>Question 10: What is the hex number 6B in binary? (6-8)</b>	✓
01101011	✓
10101110	
01110111	

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