Codefez 1.2.3-5 Worksheet 3 Answers - Units, Data Storage & Compression

Q	Answer	Mark	Guidance
1	- The amplitude of the sound is measured using a mic - … and is converted to binary - … at regular intervals	2	
2	- The more regular the intervals, the more data there is to store. - … therefor the file size will be bigger - Samples at higher intervals means that the sound will be closer to the original sound	3	
3	- Higher bit depth means that there is a higher number of bits available to record the height of a wave. - A higher bit depth that means that sampled data will be closer to an actual analogue wave.	2	
4	- More bits would mean that there would be a higher number of colours that can be stored. - 2 bits would mean that there are 4 possible colours (2^2). - … 4 bits would mean that there would be 16 possible colours (4^2)	2	
5	00111001	1	
6	141	1	
7	Resolution = 1 (colour depth) x 5 (height) x 11 (width) = 45	2	1 mark for working out, 1 mark for answer
8	Resolution = 90	1	
9	1 mark for: - Correct answer of (1)00000111 - 1 mark for correctly circling the overflow	2	
10	1 mark for each correct answer <table><tr><th>Unit</th><th>Order</th></tr><tr><td>Gigabyte</td><td>5</td></tr><tr><td>Bit</td><td>1</td></tr><tr><td>Nibble</td><td>2</td></tr><tr><td>Byte</td><td>3</td></tr><tr><td>Megabyte</td><td>4</td></tr></table>	5	