

Oxford Revise | OCR Computer Science | Answers

Chapter 9 File size

Question	Answer						Extra information	Marks	AO / Specification reference																																				
1	<table><tr><td>File size</td><td>4 megabytes</td><td>4 kilobytes</td><td>4 petabytes</td><td>4 gigabytes</td><td>4 terabytes</td></tr><tr><td>4000 terabytes</td><td></td><td></td><td>✓</td><td></td><td></td></tr><tr><td>4000 megabytes</td><td></td><td></td><td></td><td>✓</td><td></td></tr><tr><td>4000 gigabytes</td><td></td><td></td><td></td><td></td><td>✓</td></tr><tr><td>8000 nibbles</td><td></td><td>✓</td><td></td><td></td><td></td></tr><tr><td colspan="6"></td></tr></table>						File size	4 megabytes	4 kilobytes	4 petabytes	4 gigabytes	4 terabytes	4000 terabytes			✓			4000 megabytes				✓		4000 gigabytes					✓	8000 nibbles		✓										1 mark for each correct row.	1 1 1 1	AO2 1.2.3
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2	<p>Image file size = number of pixels x colour depth</p> <p>Number of pixels = $480 \times 640 = 307200$</p> <p>Colour depth = 8</p> <p>File size = $307200 \times 8 = 2457600$ bytes</p> <p>$= 2457600 \div 1024 = 2400$ kilobytes</p>	<p>1 mark for each correct line of working up to a maximum of 2.</p> <p>Correct answer.</p> <p>Division by 1000 to give 2457.6 kilobytes or rounded equivalent, would also be acceptable.</p>	<p>1</p> <p>1</p> <p>1</p>	<p>AO2</p> <p>1.2.3</p>
3	<p>$01010000 = 64 + 16 = 80$ in denary</p> <p>If 80 represents P, 85 represents U</p>	<p>1 mark for working, for example, the denary equivalent of 0101000.</p> <p>Correct answer.</p>	<p>1</p> <p>1</p>	<p>AO2</p> <p>1.2.4</p>

Question	Answer	Extra information	Marks	AO / Specification reference
4	Lossy compression works by permanently removing data the algorithm considers unnecessary. If a computer program is compressed and some data was permanently deleted from it, the program may not function correctly when it is decompressed, because some of the code may be missing.	1 mark for each correct statement, up to a maximum of 3 marks, explaining why lossy compression is not suitable for compressing a computer program file.	1 1 1	AO2 1.2.5