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# **GCSE MARKING SCHEME**

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**SUMMER 2018**

**GCSE (LEGACY)  
COMPUTER SCIENCE - UNIT 2  
4342/01**

## **INTRODUCTION**

This marking scheme was used by WJEC for the 2018 examination. It was finalised after detailed discussion at examiners' conferences by all the examiners involved in the assessment. The conference was held shortly after the paper was taken so that reference could be made to the full range of candidates' responses, with photocopied scripts forming the basis of discussion. The aim of the conference was to ensure that the marking scheme was interpreted and applied in the same way by all examiners.

It is hoped that this information will be of assistance to centres but it is recognised at the same time that, without the benefit of participation in the examiners' conference, teachers may have different views on certain matters of detail or interpretation.

WJEC regrets that it cannot enter into any discussion or correspondence about this marking scheme.

**GCSE COMPUTER SCIENCE (LEGACY)  
UNIT 2 - SOLVING PROBLEMS USING COMPUTERS**

**SUMMER 2018 MARK SCHEME**

Task 1	Answer	MAX 6
	<p><b>One mark for each correct <u>pair</u> in the correct location: i.e.</b>  <b>&lt;h1&gt; &lt;/h1&gt;</b>  <b>&lt;center&gt; &lt;/center&gt;</b>  <b>&lt;b&gt; &lt;/b&gt;</b>  <b>Accept either &lt;p&gt; or &lt;p&gt; &lt;/p&gt; (No need to close p)</b></p> <p><b>&lt;a href="url"&gt; &lt;/a&gt; (Note http:// is required or the link will not work correctly on many devices)</b></p> <p><b>Accept alternative tags e.g. &lt;big&gt;&lt;/big&gt; instead of &lt;h1&gt;&lt;/h1&gt;, etc</b></p> <p><b>Accept alternative HTML (not CSS) solutions which work (only if the identical formatting would be achieved).</b></p> <pre>&lt;html&gt;&lt;body&gt;  &lt;center&gt;  &lt;h1&gt;Home Network Installation&lt;/h1&gt;  &lt;img src="networkpic.jpg"&gt;  &lt;p&gt;&lt;b&gt;&lt;i&gt;HD video and low latency gaming &lt;/p&gt;&lt;/b&gt;&lt;/i&gt;  &lt;/center&gt;  &lt;p&gt;There's no doubt installing a wired network to complement the wireless network could improve throughput and lower the latency time of your games. &lt;/p&gt;  &lt;p&gt;Get a quote for a home network installation at our website here: &lt;/p&gt;  &lt;p&gt;Click the link below to find out more:&lt;/p&gt;  &lt;p&gt; &lt;a href="http://www.networkmyhome.co.uk"&gt; www.networkmyhome.co.uk &lt;/a&gt;&lt;/p&gt;  &lt;/body&gt;&lt;/html&gt;</pre>	<p><b>Award:</b></p> <p><b>1&lt;center&gt;</b></p> <p><b>1&lt;h1&gt;</b></p> <p><b>1working&lt;img&gt;</b></p> <p><b>1&lt;b&gt;&lt;i&gt;</b></p> <p><b>1&lt;p&gt;</b></p> <p><b>1&lt;a href = http:&gt; working.</b></p>

Task 2	Answer	MAX 9
	<p><b>Brackets+Bold text indicate other accepted Pseudocode.</b></p> <p><b>Accept i,j,k for loops, accept any other meaningful variable name.</b></p> <p><b>Amendments to check for zero entered or divide by zero error (and any further validation) accepted not expected.</b></p> <p><b>Line numbers not necessary Ignore indentation or lack of it. Ignore type/casting problems.</b></p> <p><b>Accept alternative solutions as long as they provide the same result.</b></p> <p><b>Accept some logical check on the continuous loop to end if an error/rogue value is encountered. (Accepted not expected.)</b></p> <p><b>Ignore typecasting issues.</b></p> <p><b>The solution provides <u>all</u> correct outputs</b></p> <pre> Declare noBooks as integer = 0 Declare currentPrice as real = 0 Declare totalPrice as real = 0 Declare meanPrice as real = 0 Declare discount as real = 0  output "Input number of books being purchased:"  input noBooks  For i = 1 to noBooks  output "Input price of book in £:" input currentPrice totalPrice=totalPrice+currentPrice  next i  output "Total Price:£" + totalPrice  meanPrice=totalPrice/noBooks </pre>	<p><b>MAX 9</b></p> <p><b>Award:</b></p> <p><b>1 mark</b></p> <p><b>Condone no declarations</b></p> <p><b>1 (output a string/literal)</b></p> <p><b>1 (input to a variable)</b></p> <p><b>1 mark (correct loop)</b></p> <p><b>1 (calculate and output totalPrice)</b></p> <p><b>1 (calculate and output meanPrice)</b></p>

	<pre>output "Mean Price:£" + meanPrice  if totalPrice &gt; 50 OR meanPrice &gt; 10 then   output "Discount Earned."  discount = totalPrice/10 output "Amount of discount:£" &amp; discount  end if  End</pre>	<p><b>1 (if statement for discount)</b></p> <p><b>1 (correctly using the OR operator)</b></p> <p><b>1 (calculate and output discount)</b></p>
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3.(a)	<u>Indicative content:</u> Implicit world is opened – no mark for this stage	Max 15
(b)	World is pre-populated on load with: <ul style="list-style-type: none"> <li>• one plane</li> <li>• one or more suns</li> <li>• two or more clouds</li> </ul>	
(c)	<ul style="list-style-type: none"> <li>• clouds move randomly around world</li> <li>• random movement implemented using getRandom()</li> </ul>	
(d)	<ul style="list-style-type: none"> <li>• plane moves around world according to arrow keys</li> <li>• plane moves with a reasonable relative speed to clouds</li> </ul>	
(e)	<ul style="list-style-type: none"> <li>• cloud is removed from world on collision with plane</li> </ul>	
(f)	<ul style="list-style-type: none"> <li>• sound plays when plane and cloud collide</li> </ul>	
(g)	<ul style="list-style-type: none"> <li>• adding counter to world</li> <li>• counter increases by 10 when plane and cloud collide</li> </ul>	
(h)	<ul style="list-style-type: none"> <li>• cloud is removed from world on collision with sun</li> </ul>	
(i)	<ul style="list-style-type: none"> <li>• counter decreases by 5 when cloud and sun collide</li> <li>• implementation via parameter passing as opposed to wholly new method</li> </ul>	
(j)	<ul style="list-style-type: none"> <li>• Greenfoot world saved correctly as FinalWJECclouds</li> </ul>	

Band	<b>Q3</b>
	<b>Max 15 marks</b>
<b>3</b>	<p style="text-align: center;"><b>11-15 marks</b></p> <p>The candidate has:</p> <ul style="list-style-type: none"> <li>• Edited the world, including all or the majority of the functionality and features as required in the question and stated in the indicative content. The majority of the functionality and features is defined as a response that provides eleven to fifteen items of the functionality or features signalled in the indicative content</li> <li>• Used and fully exploited the programming facilities of the language</li> <li>• Demonstrated a sound understanding of the appropriate tools and techniques available to them</li> <li>• Written code that is well structured and functional</li> </ul>
<b>2</b>	<p style="text-align: center;"><b>6-10 marks</b></p> <p>The candidate has:</p> <ul style="list-style-type: none"> <li>• Edited the world, including most of the functionality and features as required in the question and stated in the indicative content. Most of the functionality or features is defined as a response that provides six to ten items of the functionality or features signalled in the indicative content</li> <li>• Made use of an appropriate range of the programming facilities of the language</li> <li>• Demonstrated an understanding of the tools and techniques available to them</li> <li>• Written code that is functional</li> </ul>
<b>1</b>	<p style="text-align: center;"><b>1-5 marks</b></p> <p>The candidate has:</p> <ul style="list-style-type: none"> <li>• Edited the world, including a limited range of the functionality and features as stated in the indicative content. A limited range of functionality or features is defined as a response that provides one to five items of the functionality or features signalled in the indicative content</li> <li>• Used a limited range of the programming facilities of the language</li> <li>• Demonstrated a limited understanding of the tools and techniques available to them</li> <li>• Written code that is only partially functional</li> </ul>
<b>0</b>	<p><b>0 marks</b></p> <p>Response not credit worthy or not attempted.</p>