



# Cambridge IGCSE™

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**INFORMATION AND COMMUNICATION TECHNOLOGY**

**0417/31**

Paper 3 Data Analysis and Website Authoring

**May/June 2022**

MARK SCHEME

Maximum Mark: 80

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**Published**

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge International will not enter into discussions about these mark schemes.

Cambridge International is publishing the mark schemes for the May/June 2022 series for most Cambridge IGCSE, Cambridge International A and AS Level and Cambridge Pre-U components, and some Cambridge O Level components.

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This document consists of **8** printed pages.

**Generic Marking Principles**

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptors for a question. Each question paper and mark scheme will also comply with these marking principles.

**GENERIC MARKING PRINCIPLE 1:**

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

**GENERIC MARKING PRINCIPLE 2:**

Marks awarded are always **whole marks** (not half marks, or other fractions).

**GENERIC MARKING PRINCIPLE 3:**

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

**GENERIC MARKING PRINCIPLE 4:**

Rules must be applied consistently, e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

**GENERIC MARKING PRINCIPLE 5:**

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

**GENERIC MARKING PRINCIPLE 6:**

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

## Evidence document

j1 &gt; j2231

| Name              | Date modified    | Type          | Size      | Height      | Width       | Frame height | Frame width |
|-------------------|------------------|---------------|-----------|-------------|-------------|--------------|-------------|
| balloon_9999.png  | 13/09/2020 16:33 | PNG File      | 10,944 KB | 6000 pixels | 2099 pixels |              |             |
| j31balloon.jpg    | 13/09/2020 16:28 | JPG File      | 2,272 KB  | 6000 pixels | 2099 pixels |              |             |
| j31balloon.mp4    | 02/04/2020 10:48 | MP4 File      | 5,774 KB  |             |             | 480          | 854         |
| j31banner.jpg     | 02/04/2020 11:37 | JPG File      | 1,819 KB  | 666 pixels  | 4000 pixels |              |             |
| j31kenya.htm      | 05/04/2020 10:25 | HTML Document | 1 KB      |             |             |              |             |
| j31maasai.jpg     | 04/04/2020 10:28 | JPG File      | 137 KB    | 500 pixels  | 1500 pixels |              |             |
| j31serengeti.jpg  | 04/04/2020 10:24 | JPG File      | 316 KB    | 500 pixels  | 1500 pixels |              |             |
| j31stylesheet.css | 06/04/2020 09:54 | CSS File      | 1 KB      |             |             |              |             |
| j31tanzania.htm   | 05/04/2020 10:30 | HTML Document | 1 KB      |             |             |              |             |
| j31text.txt       | 04/04/2020 11:08 | Text Document | 1 KB      |             |             |              |             |

Screen shot includes folder name **j2231**, image dimensions, frame width, frame height, file names, file extensions & sizes 1 mark  
 Saved as balloon\_9999 in .png format 1 mark

```

j31stylesheet_ZZ999_9999.css - Notepad
File Edit Format View Help
/* Last edited by A Candidate, ZZ999, 9999 for Tawara Balloon Safaris */

body                {background-color:#74abd2;}

h1,h2,h3           {font-family: "Times CY", "Times New Roman", serif;
                    color: #000000;}

h1                 {text-align: center;
                    font-size: 16pt;}

h2                 {text-align: justify;
                    font-size: 12pt;}

h3                 {text-align: left;
                    font-size: 10pt;}

table               {border-collapse: separate;
                    border-spacing: 10px;
                    margin-left:5%;
                    margin-right:5%;
                    margin-top:5%;
                    margin-bottom:5%;}

table,td           {border: 1px solid #000000;}

td                 {padding: 10px;}

```

|                |  |        |
|----------------|--|--------|
| Comment        | /* Candidate details at top                | 1 mark |
|                | */ corrected                               | 1 mark |
| body {...}     | background-color: #74abd2                  | 1 mark |
| h1,h2,h3 {...} | font-family: "Times CY"                    | 1 mark |
|                | ,"Times New Roman"                         | 1 mark |
|                | ,serif                                     | 1 mark |
|                | color: #000000                             | 1 mark |
|                | all 3 correct fonts & colour in h1, h2, h3 | 1 mark |
|                | 3 styles using single selector             | 1 mark |
| h1 {...}       | text-align:center;                         | 1 mark |
|                | font-size: 16pt                            | 1 mark |
| h2 {...}       | text-align:justify;                        | 1 mark |
|                | font-size: 12pt                            | 1 mark |
| h3 {...}       | text-align:left;                           | 1 mark |
|                | font-size: 10pt                            | 1 mark |
| table {...}    | border-collapse: separate;                 | 1 mark |
|                | border-spacing:10px;                       | 1 mark |
|                | margin-left:5%                             | 1 mark |
|                | margin-right:5%                            | 1 mark |
|                | margin-top:5%                              | 1 mark |
|                | margin-bottom:5%                           | 1 mark |
| table,td {...} | border-width:1px                           | 1 mark |
|                | border-style:solid                         | 1 mark |
|                | border-color:#000000                       | 1 mark |
|                | All using single selector                  | 1 mark |
| td {...}       | padding:10px;                              | 1 mark |
| CSS syntax     | Correct css syntax                         | 1 mark |

**Tawara Balloon Safaris**

Tawara Balloon Safaris offer amazing early morning trips across the Maasai Mara and Serengeti national parks. Watch the animals in their element, from the air, as you silently drift overhead. As a company we have over 25 years' experience of ballooning and employ only fully qualified and experienced pilots. Our ground crew will collect you from your camp and meet you at the end of the safari with a leisurely champagne breakfast in the bush.

**Serengeti**

**Maasai Mara**

Click on the images above to enjoy the wonders of Kenya and Tanzania.  
 Web page last edited by: A Candidate ZZ999 9999

**Click on the images above to enjoy the wonders of Kenya and Tanzania.  
 Web page last edited by: A Candidate ZZ999 9999**

|   |        |
|---|--------|
| In browser, address visible                     | 1 mark |
| Separated table & cell borders visible          | 1 mark |
| 3 left still images visible in correct cells    | 1 mark |
| Balloon image in right cell                     | 1 mark |
| Rotated through 90° clockwise                   | 1 mark |
| Horizontal reflection (flip)                    | 1 mark |
| Video visible                                   | 1 mark |
| Text placed from source file                    | 1 mark |
| In style h2                                     | 1 mark |
| Line 1 text entry 100% accurate                 | 1 mark |
| Web page last edited by: A Candidate ZZ999 9999 | 1 mark |
| Split as 2 paragraphs in h3                     | 1 mark |

|  |   |                  |   |        |            |                                |                  |             |                                |                  |       |           |        |       |                          |        |  |                  |        |  |                              |        |  |                          |        |  |                      |        |  |                               |        |       |           |        |           |                                |        |  |                        |        |  |                |        |
|--|---|------------------|---|--------|------------|--------------------------------|------------------|-------------|--------------------------------|------------------|-------|-----------|--------|-------|--------------------------|--------|--|------------------|--------|--|------------------------------|--------|--|--------------------------|--------|--|----------------------|--------|--|-------------------------------|--------|-------|-----------|--------|-----------|--------------------------------|--------|--|------------------------|--------|--|----------------|--------|
| <pre> &lt;!DOCTYPE html&gt; &lt;html&gt; &lt;head&gt;   &lt;Title&gt;Tawara Balloon Safaris&lt;/title&gt;   &lt;base target="_new"/&gt;   &lt;link rel="stylesheet" type="text/css" href="j31stylesheet_ZZ999_9999.css"&gt; &lt;/head&gt; &lt;body&gt;   &lt;table style="width:90%;" border="1"&gt;     &lt;tr&gt;       &lt;td colspan="2" style="width:70%;"&gt;         &lt;img src="j31banner.jpg" alt="Banner for Tawara Balloon Safaris" style="width:100%" /&gt;       &lt;/td&gt;       &lt;td rowspan="5" style="width:30%;"&gt;         &lt;img src="balloon_9999.png" alt="Image of a hot air balloon" style="width:100%" /&gt;       &lt;/td&gt;     &lt;/tr&gt;     &lt;tr&gt;       &lt;td colspan="2" style="width:70%;"&gt;         &lt;video width="100%" controls&gt;           &lt;source src="j31balloon.mp4" type="video/mp4"&gt;           Your browser does not support this video file type.         &lt;/video&gt;       &lt;/td&gt;     &lt;/tr&gt;     &lt;tr&gt;       &lt;td colspan="2" style="width:70%; height:10%"&gt;         &lt;h2&gt;Tawara Balloon Safaris offer amazing early morning trips across the Maasai Mara and Serengeti national parks. Watch the animals in their element, from the air, as you silently drift overhead. As a company we have over 25 years' experience of ballooning and employ only fully qualified and experienced pilots. Our ground crew will collect you from your camp and meet you at the end of the safari with a leisurely champagne breakfast in the bush.         &lt;/h2&gt;       &lt;/td&gt;     &lt;/tr&gt;     &lt;tr&gt;       &lt;td style="width:35%"&gt;         &lt;a href="j31tanzania.htm" target="_self"&gt; </pre> | <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">         Title accurate and in head section 1 mark<br/>         &lt;base target="_new"&gt; in head section 1 mark       </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">         Stylesheet attached in head section ... 1 mark<br/>         ... renamed as j31stylesheet_ZZ999_9999.css 1 mark       </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <table border="0" style="width: 100%;"> <tr> <td style="width: 30%;">Table</td> <td style="width: 40%;">style="width:90%"<br/>no letters visible</td> <td style="width: 30%; text-align: right;">1 mark</td> </tr> <tr> <td>Row 1 left</td> <td>style="width:70%"<br/>colspan=2</td> <td style="text-align: right;">1 mark<br/>1 mark</td> </tr> <tr> <td>Row 1 right</td> <td>style="width:30%"<br/>rowspan=5</td> <td style="text-align: right;">1 mark<br/>1 mark</td> </tr> </table> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <table border="0" style="width: 100%;"> <tr> <td style="width: 30%;">Row 2</td> <td style="width: 40%;">colspan=2</td> <td style="width: 30%; text-align: right;">1 mark</td> </tr> </table> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <table border="0" style="width: 100%;"> <tr> <td style="width: 30%;">Row 2</td> <td style="width: 40%;">video &lt;...&gt; tag used ...</td> <td style="width: 30%; text-align: right;">1 mark</td> </tr> <tr> <td></td> <td>... width="100%"</td> <td style="text-align: right;">1 mark</td> </tr> <tr> <td></td> <td>... Source&lt;...&gt; tag used ...</td> <td style="text-align: right;">1 mark</td> </tr> <tr> <td></td> <td>... src="j31balloon.mp4"</td> <td style="text-align: right;">1 mark</td> </tr> <tr> <td></td> <td>... type="video/mp4"</td> <td style="text-align: right;">1 mark</td> </tr> <tr> <td></td> <td>... Appropriate error message</td> <td style="text-align: right;">1 mark</td> </tr> </table> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <table border="0" style="width: 100%;"> <tr> <td style="width: 30%;">Row 3</td> <td style="width: 40%;">colspan=2</td> <td style="width: 30%; text-align: right;">1 mark</td> </tr> </table> </div> <div style="border: 1px solid black; padding: 5px;"> <table border="0" style="width: 100%;"> <tr> <td style="width: 30%;">Hyperlink</td> <td style="width: 40%;">anchor around j31serengeti.jpg</td> <td style="width: 30%; text-align: right;">1 mark</td> </tr> <tr> <td></td> <td>href="j31tanzania.htm"</td> <td style="text-align: right;">1 mark</td> </tr> <tr> <td></td> <td>target="_self"</td> <td style="text-align: right;">1 mark</td> </tr> </table> </div> | Table            | style="width:90%"<br>no letters visible | 1 mark | Row 1 left | style="width:70%"<br>colspan=2 | 1 mark<br>1 mark | Row 1 right | style="width:30%"<br>rowspan=5 | 1 mark<br>1 mark | Row 2 | colspan=2 | 1 mark | Row 2 | video <...> tag used ... | 1 mark |  | ... width="100%" | 1 mark |  | ... Source<...> tag used ... | 1 mark |  | ... src="j31balloon.mp4" | 1 mark |  | ... type="video/mp4" | 1 mark |  | ... Appropriate error message | 1 mark | Row 3 | colspan=2 | 1 mark | Hyperlink | anchor around j31serengeti.jpg | 1 mark |  | href="j31tanzania.htm" | 1 mark |  | target="_self" | 1 mark |
| Table  | style="width:90%"<br>no letters visible   | 1 mark           |   |        |            |                                |                  |             |                                |                  |       |           |        |       |                          |        |  |                  |        |  |                              |        |  |                          |        |  |                      |        |  |                               |        |       |           |        |           |                                |        |  |                        |        |  |                |        |
| Row 1 left   | style="width:70%"<br>colspan=2  | 1 mark<br>1 mark |   |        |            |                                |                  |             |                                |                  |       |           |        |       |                          |        |  |                  |        |  |                              |        |  |                          |        |  |                      |        |  |                               |        |       |           |        |           |                                |        |  |                        |        |  |                |        |
| Row 1 right  | style="width:30%"<br>rowspan=5  | 1 mark<br>1 mark |   |        |            |                                |                  |             |                                |                  |       |           |        |       |                          |        |  |                  |        |  |                              |        |  |                          |        |  |                      |        |  |                               |        |       |           |        |           |                                |        |  |                        |        |  |                |        |
| Row 2  | colspan=2   | 1 mark           |   |        |            |                                |                  |             |                                |                  |       |           |        |       |                          |        |  |                  |        |  |                              |        |  |                          |        |  |                      |        |  |                               |        |       |           |        |           |                                |        |  |                        |        |  |                |        |
| Row 2  | video <...> tag used ...  | 1 mark           |   |        |            |                                |                  |             |                                |                  |       |           |        |       |                          |        |  |                  |        |  |                              |        |  |                          |        |  |                      |        |  |                               |        |       |           |        |           |                                |        |  |                        |        |  |                |        |
|  | ... width="100%"  | 1 mark           |   |        |            |                                |                  |             |                                |                  |       |           |        |       |                          |        |  |                  |        |  |                              |        |  |                          |        |  |                      |        |  |                               |        |       |           |        |           |                                |        |  |                        |        |  |                |        |
|  | ... Source<...> tag used ...  | 1 mark           |   |        |            |                                |                  |             |                                |                  |       |           |        |       |                          |        |  |                  |        |  |                              |        |  |                          |        |  |                      |        |  |                               |        |       |           |        |           |                                |        |  |                        |        |  |                |        |
|  | ... src="j31balloon.mp4"  | 1 mark           |   |        |            |                                |                  |             |                                |                  |       |           |        |       |                          |        |  |                  |        |  |                              |        |  |                          |        |  |                      |        |  |                               |        |       |           |        |           |                                |        |  |                        |        |  |                |        |
|  | ... type="video/mp4"  | 1 mark           |   |        |            |                                |                  |             |                                |                  |       |           |        |       |                          |        |  |                  |        |  |                              |        |  |                          |        |  |                      |        |  |                               |        |       |           |        |           |                                |        |  |                        |        |  |                |        |
|  | ... Appropriate error message   | 1 mark           |   |        |            |                                |                  |             |                                |                  |       |           |        |       |                          |        |  |                  |        |  |                              |        |  |                          |        |  |                      |        |  |                               |        |       |           |        |           |                                |        |  |                        |        |  |                |        |
| Row 3  | colspan=2   | 1 mark           |   |        |            |                                |                  |             |                                |                  |       |           |        |       |                          |        |  |                  |        |  |                              |        |  |                          |        |  |                      |        |  |                               |        |       |           |        |           |                                |        |  |                        |        |  |                |        |
| Hyperlink  | anchor around j31serengeti.jpg  | 1 mark           |   |        |            |                                |                  |             |                                |                  |       |           |        |       |                          |        |  |                  |        |  |                              |        |  |                          |        |  |                      |        |  |                               |        |       |           |        |           |                                |        |  |                        |        |  |                |        |
|  | href="j31tanzania.htm"  | 1 mark           |   |        |            |                                |                  |             |                                |                  |       |           |        |       |                          |        |  |                  |        |  |                              |        |  |                          |        |  |                      |        |  |                               |        |       |           |        |           |                                |        |  |                        |        |  |                |        |
|  | target="_self"  | 1 mark           |   |        |            |                                |                  |             |                                |                  |       |           |        |       |                          |        |  |                  |        |  |                              |        |  |                          |        |  |                      |        |  |                               |        |       |           |        |           |                                |        |  |                        |        |  |                |        |

```

    
  </a>
</td>
<td style="width:35%">
  <a href="j31kenya.htm">
    
  </a>
</td>
</tr>
<tr>
  <td colspan="2" style="width:70%; height:10%">
    <h3>Click on the images above to enjoy the wonders of Kenya and
Tanzania.<br>
Web page last edited by: A Candidate ZZ999 9999
    </h3>
  </td>
</tr>
</table>
</body>
</html>

```

|           |                             |        |
|-----------|-----------------------------|--------|
| Hyperlink | anchor around j31maasai.jpg | 1 mark |
|           | href="j31kenya.htm"         | 1 mark |

|                |                      |        |
|----------------|----------------------|--------|
| 4 still images | Appropriate alt text | 1 mark |
|                | style="width:100%"   | 1 mark |

Mark from any printout  
 Header Candidate details on left 1 mark  
 File name **Balloon\_ZZ999\_9999** with no path on right 1 mark

A Candidate, ZZ999, 9999

Balloon\_ZZ999\_9999.xlsx

|   | A                           | B  |
|---|-----------------------------|--|
| 1 | Balloon equipment checklist |  |
| 2 |                             |  |
| 3 | Balloon name:               | Beta   |
| 4 | Item number:                | 2  |
| 5 | Equipment item:             | =VLOOKUP(B4,j31tables.csv!\$A\$3:\$B\$15,2,0)    |
| 6 |                             |  |
| 7 | Checked:                    | =VLOOKUP(B3,j31tables.csv!\$D\$4:\$Q\$11,B4+1,0) |

B5 =VLOOKUP( ... ) 1 mark  
 B4 1 mark  
 j31tables.csv 1 mark  
 !\$A\$3:\$B\$15 1 mark  
 ,2,0 1 mark  
 B7 =VLOOKUP(B3, ... ) 1 mark  
 ,j31tables.csv 1 mark  
 !\$D\$4:\$Q\$11 1 mark  
 ,B4+1,0 1 mark  
 Landscape, row & col heads & fully visible 1 mark

A Candidate, ZZ999, 9999

Balloon\_ZZ999\_9999.xlsx

Balloon equipment checklist

Balloon name: Beta  
 Item number: 2  
 Equipment item: portable lights  
 Checked: 22 February 2022 by Naserian

Values  
 Data entered for **Beta** and **2** with correct results 1 mark  
 Single page fully visible with no row & column headings 1 mark