



Cambridge International Examinations
Cambridge International General Certificate of Secondary Education



INFORMATION AND COMMUNICATION TECHNOLOGY

0417/32

Paper 3 Practical Test B

May/June 2017

MARK SCHEME

Maximum Mark: 80

Published

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

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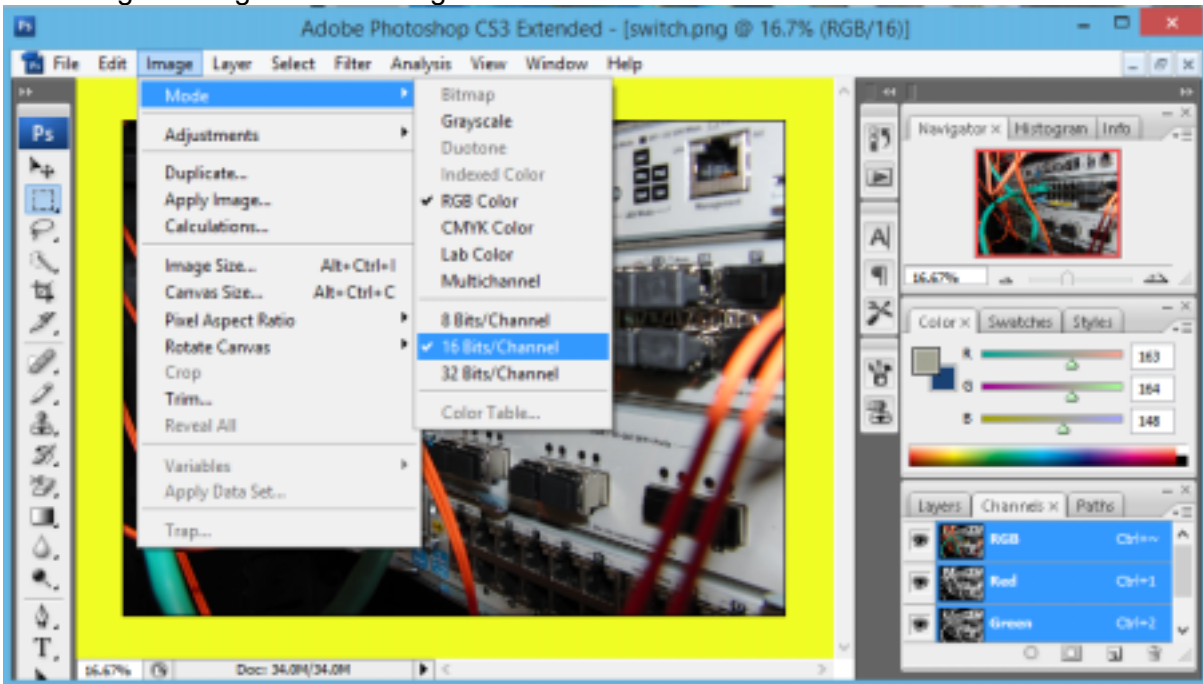
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This document consists of **11** printed pages.

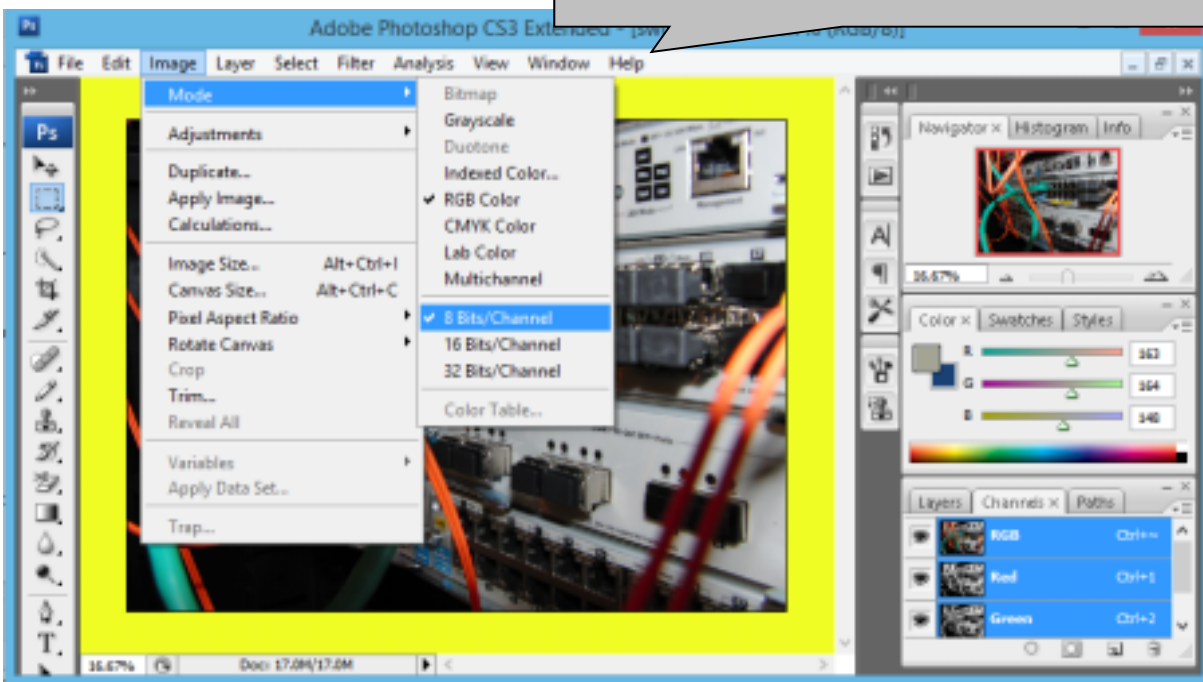
Evidence 1

Place original image before changes here:



Place image after changes here:

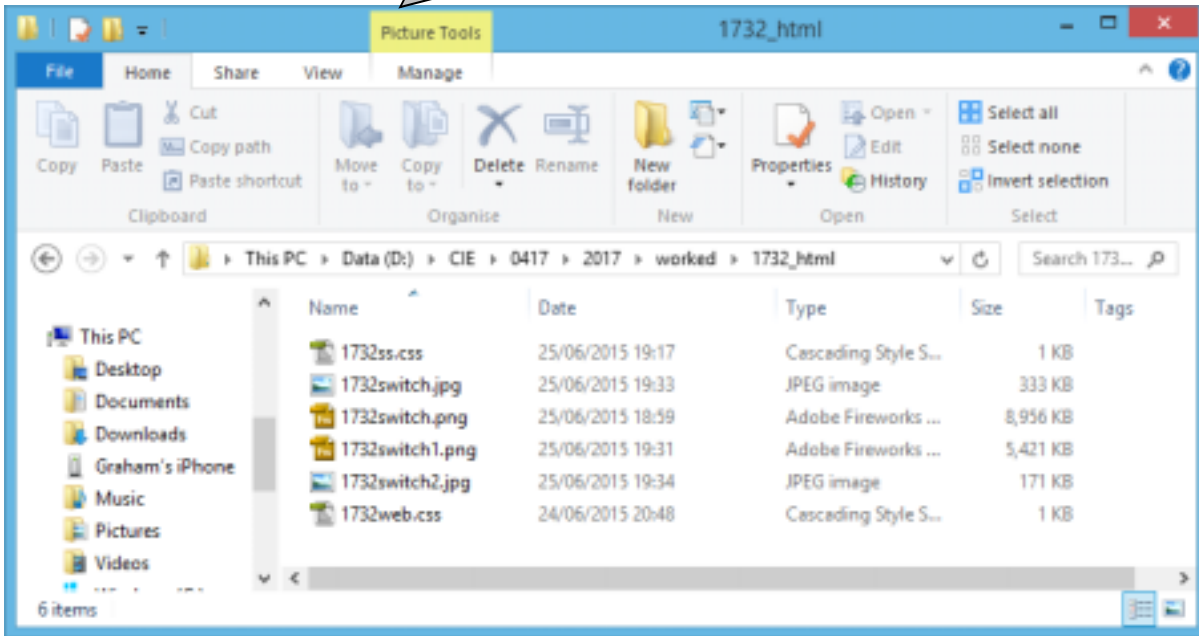
Colour depth changed from 16 to 8 bits 1 mark



1732_html 1732web.css, 1732ss.css, 1732switch.png
 Visible with file sizes 1 mark
 jpg/gif/png saved with reduced file size 1 mark

Evidence 2

Place image of folder showing folder name, file names, extensions and sizes:



Evaluation; (4 from) 1 mark each
 Changed from PNG to JPG/GIF format
 Changed to 8 bits/channel
 To reduce storage space/file size
 To reduce image transmission/upload/download time
 8 bits per channel reduces transmission time by about ½.
 Reduced image quality may not be suitable for web page

Evidence 3

Place your evaluation here:

File has been changed from PNG file settings of 16 bits/channel to a JPG/GIF file of 8 bits per channel. This reduces storage space and image transmission time by about ½.

Evidence 4

Place screenshot of the cropped image here:

Cropped to show middle 1/3 only 1 mark



Comments	/* Candidate details */	1 mark
table	width:600px	1 mark
	margin-left:auto	1 mark
	margin-right:auto	1 mark
h1	color: #000080	1 mark
	font-family: Chalkduster	1 mark
	,Verdana	1 mark
	,sans-serif	1 mark
	font-size:30pt	1 mark
	text-align:center	1 mark
h2,h3,li	font-family:Arial,sans-serif	1 mark
font-family	one style set for all 3 styles	1 mark
h2,li	font-size:16pt	1 mark
font-size	one style set for these 2 styles	1 mark
h3	font-size:14pt	1 mark
	font-style:italic	1 mark
CSS syntax	Including ; between properties	1 mark

Evidence 5

1732ss9999.css - Notepad

File Edit Format View Help

/*A Candidate,ZZ999,9999*/

```

table      {width:600px;
            margin-left:auto;
            margin-right:auto}
h1         {color:#000080;
            font-family:Chalkduster,Verdana,sans-serif;
            font-size:30pt;
            text-align:center}
h2,h3,li   {font-family:Arial,sans-serif}
h2,li      {font-size:16pt}
h3         {font-size:14pt;
            font-style:italic}

```

PUBLISHED


Browser	In browser	1 mark
Table	3 columns & 4 rows borders visible	1 mark
1st row	Uploading and publishing a website as h1	1 mark
2nd row	The acronym ftp stands for: File Transfer Protocol	1 mark
3rd row	Correct text in left cell 3+ answers as numbered list	1 mark
4th row	Website created by: & name & numbers	1 mark
Left column	Rows 2-4 set as style h3	1 mark
2nd column	Row 2 set as style h2 (3 from):	1 mark each

FTP client software
All files in one folder
Host Name/URL/IP address for ftp
Host port to be used for upload
Username and password

Evidence 6



Uploading and publishing a website

<i>The acronym ftp stands for:</i>	File Transfer Protocol	
<i>Here are 3 things needed to upload and publish the content of a website using ftp:</i>	<ol style="list-style-type: none"> 1. FTP client software 2. All files in one folder 3. Host Name for FTP 4. Host port to be used for upload 5. Username & password 	
<i>Website created by: A Candidate, ZZ999, 9999</i>		

Evidence 7

```

<!DOCTYPE html>
<html>
<head>
  <link rel="stylesheet" href="1732web.css">
  <link rel="stylesheet" href="1732ss9999.css">
</head>
<body>
  <table border="1">
    <tr>
      <td colspan=3><h1>Uploading and publishing a website</h1>
      </td>
    </tr>
    <tr>
      <td><h3>The acronym ftp stands for:</h3>
      </td>
      <td><h2>File Transfer Protocol</h2>
      </td>
      <td rowspan=3>
        
      </td>
    </tr>
    <tr>
      <td><h3>Here are 3 things needed to upload and publish the content of
a website using ftp:</h3>
      </td>
      <td>
        <ol>
          <li>FTP client software</li>
          <li>All files in one folder</li>
          <li>Host Name for FTP</li>
          <li>Host port to be used for upload</li>
          <li>Username & password</li>
        </ol>
      </td>
    </tr>
    <tr>
      <td colspan=2>
        <h3>Website created by: A Candidate, ZZ999, 9999</h3>
      </td>
    </tr>
  </table>
</body>
</html>

```

Stylesheet	1732web.css attached	1 mark
	1732ss?????.css attached below web.css	1 mark
	head and body syntax correct	1 mark

colspan=3	1 mark
-----------	--------

2nd row	3rd <td> rowspan=3	1 mark
---------	--------------------	--------

Image	Resized to 200px wide	1 mark
Image	Appropriate alt text attributes	1 mark

Numbered list visible (set)	1 mark
----------------------------------	--------

Row 4	colspan=2	1 mark
-------	-----------	--------

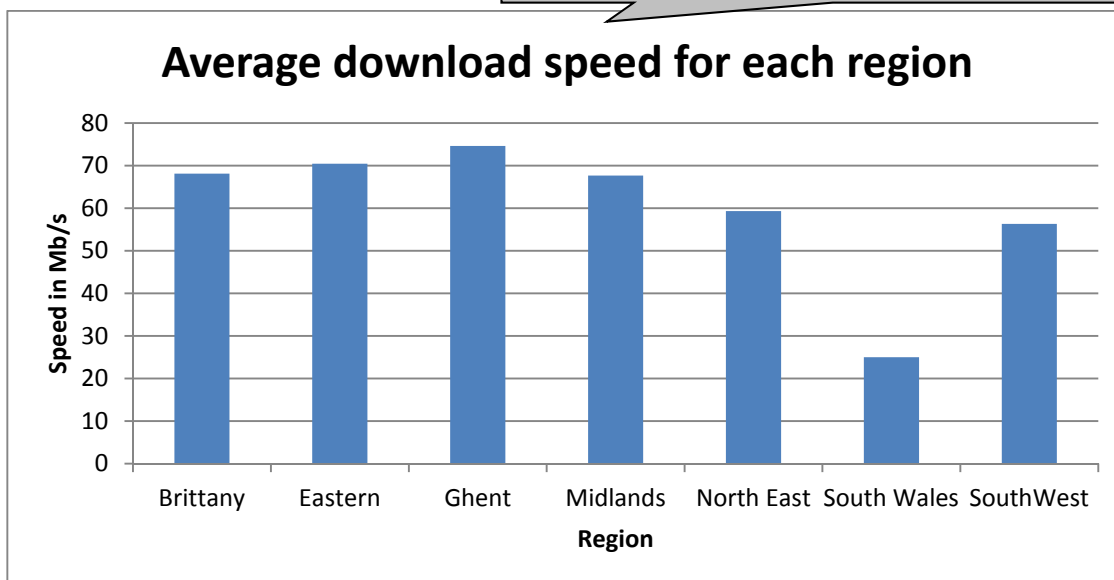
Evidence 8

Function	=AVERAGEIF() or equivalent	1 mark
	Correct ranges and cell reference	1 mark
	Replicated for all regions	1 mark

=D4	=AVERAGEIF(\$D\$4:\$D\$64,G3,\$E\$4:\$E\$64)
=D8	=AVERAGEIF(\$D\$4:\$D\$64,G4,\$E\$4:\$E\$64)
=D22	=AVERAGEIF(\$D\$4:\$D\$64,G5,\$E\$4:\$E\$64)
=D35	=AVERAGEIF(\$D\$4:\$D\$64,G6,\$E\$4:\$E\$64)
=D43	=AVERAGEIF(\$D\$4:\$D\$64,G7,\$E\$4:\$E\$64)
=D54	=AVERAGEIF(\$D\$4:\$D\$64,G8,\$E\$4:\$E\$64)
=D60	=AVERAGEIF(\$D\$4:\$D\$64,G9,\$E\$4:\$E\$64)

Evidence 9

Chart type	Bar chart with correct data	1 mark
	Titled and axes fully labelled	1 mark



Provider	VLOOKUP () used	1 mark
	Correct relative lookup reference – B4	1 mark
	Contents of file '1732Provider.csv'	1 mark
	Range !\$A\$2:\$B\$30 with abs ref	1 mark
	Correct return column 2	1 mark
	,False for correct only / sorted data	1 mark
Printout	Landscape, fully visible, A1-F18 only	1 mark
	Row and column headings displayed	1 mark
Replication	Formula replicated correctly	1 mark

Step 17

Broadband speed test data						
			Provider	Region	Speed (in Mb/s)	
	Code	PCode			Download	Upload
4	DN1	F	=VLOOKUP(B4,D:\CE\0417\2017\1732Provider.csv,1732Provider!\$A\$2:\$B\$30,2,FALSE)	Eastern	43.88	18.61
5	DN2	V	=VLOOKUP(B5,D:\CE\0417\2017\1732Provider.csv,1732Provider!\$A\$2:\$B\$30,2,FALSE)	Eastern	67.06	8.51
6	DN3	B	=VLOOKUP(B6,D:\CE\0417\2017\1732Provider.csv,1732Provider!\$A\$2:\$B\$30,2,FALSE)	North East	49.3	7.98
7	DN4	S	=VLOOKUP(B7,D:\CE\0417\2017\1732Provider.csv,1732Provider!\$A\$2:\$B\$30,2,FALSE)	North East	61.7	11.88
8	DN5	K	=VLOOKUP(B8,D:\CE\0417\2017\1732Provider.csv,1732Provider!\$A\$2:\$B\$30,2,FALSE)	North East	60.3	9.36
9	DN6	V	=VLOOKUP(B9,D:\CE\0417\2017\1732Provider.csv,1732Provider!\$A\$2:\$B\$30,2,FALSE)	North East	161.75	22.85
10	DN7	K	=VLOOKUP(B10,D:\CE\0417\2017\1732Provider.csv,1732Provider!\$A\$2:\$B\$30,2,FALSE)	North East	57.33	9.51
11	DN8	P	=VLOOKUP(B11,D:\CE\0417\2017\1732Provider.csv,1732Provider!\$A\$2:\$B\$30,2,FALSE)	North East	82.85	16.07
12	DN9	AB	=VLOOKUP(B12,D:\CE\0417\2017\1732Provider.csv,1732Provider!\$A\$2:\$B\$30,2,FALSE)	North East	39.2	5.84
13	EN30	E	=VLOOKUP(B13,D:\CE\0417\2017\1732Provider.csv,1732Provider!\$A\$2:\$B\$30,2,FALSE)	North East	50.55	8.11
14	EN11	A	=VLOOKUP(B14,D:\CE\0417\2017\1732Provider.csv,1732Provider!\$A\$2:\$B\$30,2,FALSE)	North East	61.5	10.3
15	FN12	T	=VLOOKUP(B15,D:\CE\0417\2017\1732Provider.csv,1732Provider!\$A\$2:\$B\$30,2,FALSE)	North East	90.2	4.54
16	EN13	D	=VLOOKUP(B16,D:\CE\0417\2017\1732Provider.csv,1732Provider!\$A\$2:\$B\$30,2,FALSE)	North East	69	13.3
17	EN14	C	=VLOOKUP(B17,D:\CE\0417\2017\1732Provider.csv,1732Provider!\$A\$2:\$B\$30,2,FALSE)	North East	43.8	6.26
18	EN15	G	=VLOOKUP(B18,D:\CE\0417\2017\1732Provider.csv,1732Provider!\$A\$2:\$B\$30,2,FALSE)	North East	41.93	5.89

Footer Name and numbers in centre 1 mark

A Candidate Z2999 9999

Step 18

Inserted	2 new rows at top of page	1 mark
Top row	Merge cells A1 to F1, centre aligned	1 mark
	White 24 point	1 mark
	Serif font	1 mark
	Black background	1 mark
Cells A1 & E2	Broadband speed test data	
	Speed (in Mb/s) 100% correct	1 mark
	Merged cell E2:F2 right aligned	1 mark
	Cell E2 formatted as subtitle	1 mark
	Fits single portrait page wide, fully visible with no row or column headings	1 mark

Broadbar

Speed (in Mb/s)

Code	PCode	Provider	Region	Download	Upload
EN1	F	ECC	Eastern	43.88	16.61
EN2	V	Virgin media	Eastern	97.06	8.51
EN3	B	BT	North East	49.9	7.98
EN4	S	Sky	North East	61.7	11.84
EN5	X	TalkTalk	North East	60.3	9.56
EN6	V	Virgin media	North East	161.75	22.35
EN7	K	Kcom	North East	57.55	9.51
EN8	P	Plusnet	North East	82.85	16.07
EN9	AB	Tiscali	North East	39.2	5.84
EN10	E	EE	North East	50.55	8.11
EN11	A	BE	North East	61.5	10.3
EN12	T	3	North East	30.2	4.54
EN13	O	Orange	North East	69	13.3
EN14	C	Connexin	North East	43.8	6.26
EN15	Q	Quickline	North East	41.95	5.89
EN16	L	Vodafone	North East	56.3	8.76
EN17	U	Tmobile	North East	23.7	4.74
EN18	B	BT	Midlands	45.8	9.16
EN19	S	Sky	Midlands	56.7	10.84
EN20	X	TalkTalk	Midlands	50.4	9.58
EN21	V	Virgin media	Midlands	143.15	18.63
EN22	P	Plusnet	Midlands	59.75	9.45
EN23	AB	Tiscali	Midlands	33	4.1
EN24	E	EE	Midlands	57.2	9.94
EN25	A	BE	Midlands	66.7	12.84
EN26	T	3	Midlands	72.7	12.04
EN27	O	Orange	Midlands	81.2	14.24
EN28	U	Tmobile	Midlands	63.05	11.11
EN29	Z	Zen	Midlands	82.3	15.46
EN30	B	BT	SouthWest	56.25	9.75
EN31	S	Sky	SouthWest	57.05	8.91
EN32	X	TalkTalk	SouthWest	61.8	11.36
EN33	V	Virgin media	SouthWest	149.95	19.99
EN34	P	Plusnet	SouthWest	39	7.8
EN35	AB	Tiscali	SouthWest	32.95	6.09
EN36	E	EE	SouthWest	56.55	8.81
EN37	A	BE	SouthWest	35.15	5.03
EN38	T	3	SouthWest	35.35	5.57
EN39	G	Eclipse	SouthWest	39.1	5.82
WA1	B	BT	South Wales	33.1	5.62
WA3	X	TalkTalk	South Wales	21.3	2.26
WA4	V	Virgin media	South Wales	51.7	8.34
WA6	P	Plusnet	South Wales	11.5	1.3
WA7	AB	Tiscali	South Wales	29.45	4.89
WA8	E	EE	South Wales	27.25	3.45
WA9	A	BE	South Wales	16.8	1.86


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WA10	T	3	South Wales	24.35	3.87
WA11	O	Orange	South Wales	33.25	5.15
WA16	Z	Zen	South Wales	1.45	-0.21
FR1	O	Orange	Brittany	48.55	9.21
FR2	M	SAS	Brittany	83.35	15.17
FR3	Y	SFR	Brittany	43	6.6
FR4	N	Numericable	Brittany	97.65	18.03
FR5	W	Wifirst	Brittany	68.1	11.12
BE1	AA	Telenet	Ghent	77	13.9
BE2	H	Belgacom	Ghent	82.55	15.01
BE3	R	Scarlet	Ghent	45.8	8.66
BE4	AC	Surf	Ghent	41.25	5.75
BE5	J	UPC Austria	Ghent	138.65	17.73
BE6	I	Belnet	Ghent	69.75	11.95
BE7	D	Destiny	Ghent	67.4	10.98

A Candidate, ZZ999, 9999

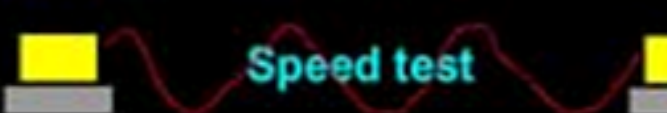
	1732logo.jpg resized in correct place	1 mark
Searching	Virgin media or 3 or Orange or Tmobile	1 mark
	Download >30	1 mark
	Sorted ascending on Provider	1 mark

Step 20

Broadband speed test data					
					
Speed (in Mb/s)					
Code	PCode	Provider	Region	Download	Upload
EN12	T	3	North East	30.2	4.54
EN26	T	3	Midlands	72.7	12.04
EN38	T	3	SouthWest	35.35	5.57
EN13	O	Orange	North East	69	13.3
EN27	O	Orange	Midlands	81.2	14.24
WA11	O	Orange	South Wales	33.25	5.15
FR1	O	Orange	Brittany	48.55	9.21
EN28	U	Tmobile	Midlands	63.05	11.11
EN2	V	Virgin media	Eastern	97.06	8.51
EN6	V	Virgin media	North East	161.75	22.35
EN21	V	Virgin media	Midlands	143.15	18.63
EN33	V	Virgin media	SouthWest	149.95	19.99
WA4	V	Virgin media	South Wales	51.7	8.34

2nd extract	Also upload speed >10	1 mark
	Sorted descending on region then download	1 mark

Step 21

Broadband speed test data					
					
Speed (in Mb/s)					
Code	PCode	Provider	Region	Download	Upload
EN33	V	Virgin media	SouthWest	149.95	19.99
EN6	V	Virgin media	North East	161.75	22.35
EN13	O	Orange	North East	69	13.3
EN21	V	Virgin media	Midlands	143.15	18.63
EN27	O	Orange	Midlands	81.2	14.24
EN26	T	3	Midlands	72.7	12.04
EN28	U	Tmobile	Midlands	63.05	11.11