Cambridge International AS & A Level

Cambridge International Examinations
Cambridge International Advanced Subsidiary and Advanced Level

INFORMATION TECHNOLOGY **9626/02**

Paper 2 Practical **March 2017**

MARK SCHEME

Maximum Mark: 110

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 will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the March 2017 series for most Cambridge IGCSE®, Cambridge International A and AS Level components and some Cambridge O Level components.

Question	Answer	Marks
1	Image ratio of software set to 16:9 1 mark End of video cut 1 mark Only 8–9 seconds of video remain (diver does not appear) 1 mark	**3**
2	Title background set to 173turtle1.png 1 mark Title 5 seconds duration 1 mark Logo placed with transparency 1 mark Top right of background image and clearly visible 1 mark	**4**
3	Title background full screen with no adjustment/movement 1 mark Additional 6 seconds duration 1 mark Title text Help us preserve the wonders of the oceans 1 mark Bottom left of image and clearly visible 1 mark Large easily read font with good contrast 1 mark Effect added for title animation 1 mark Effect added to give sufficient time to read text within the 6 seconds 1 mark	**7**
4	Caption background set to 173turtle2.jpg 1 mark Appropriate image editing to amend aspect ratio 1 mark The image fills the full screen. 1 mark Placed after video 1 mark Caption frames 7 seconds duration 1 mark Caption placed to right of turtle in a clearly visible font with good contrast 1 mark Caption text includes Tawara Wildlife Trust 1 mark 2nd block includes Gala Dinner 1 mark 3rd block includes 18th December 2017 1 mark Different effect added for caption animation 1 mark	**10**
5	Clip placed as specified 1 mark Consistent animation used for all elements 1 mark Soundtracks removed from both clips 1 mark	**3**
6	Snapshot of final frame extracted in appropriate format 1 mark …and set as background for credits 1 mark Credits 7 seconds duration 1 mark Credits include: Filmed by 1 mark Location 1 mark Country 1 mark Appropriate blank line/s as spacing between credits 1 mark Candidate name and numbers in credits in appropriate format 1 mark	**8**
7	Movie exported / saved 1 mark In wmv format 1 mark	**2**
8	End of clip removed 1 mark …cut to 51 seconds 1 mark	**2**
9	Fade in present 1 mark …with appropriate duration for length of sound clip 1 mark Fade out present 1 mark …with appropriate duration for length of sound clip 1 mark	**4**

Question	Answer	Marks
10	Audio clip saved as 173sound2.mp3 1 mark	**1**
11	Soundtrack added as specified 1 mark	**1**
12	Movie saved in wmv format 1 mark	**1**
13	Export or conversion of file type 1 mark In mp4 format 1 mark	**2**
14	Select 173auction.csv 1 mark Correct text placed in footer in appropriate format 1 mark	**2**
15	Column inserted in correct place 1 mark …with appropriate label in cell C2 1 mark Lookup function used 1 mark Cell ref column B 1 mark Relative reference (not range) 1 mark Range – external file link to 173charity.csv or copied cell range 1 mark Absolute reference 1 mark Correct return column 2 with FALSE parameter / sorted data set 1 mark	**8**
16	Lookup function used with relative reference to single cell in column E 1 mark Range – external file link to 173bidder.csv 1 mark Correct range A2:C41 with absolute reference 1 mark Correct return column 3 with FALSE parameter / sorted data set 1 mark Concatenate used or & 1 mark Text ": " 1 mark Second ampersand or correct syntax for concatenate function 1 mark Second correct Lookup function with reference to column 2 1 mark	**8**
17	Replication (to row 122) 1 mark	**1**
18	Text wrapped so single page wide 1 mark Appropriate title formatting 1 mark Appropriate numeric formatting 1 mark Page layout set to A4 and portrait and display as 12pt 1 mark	**4**
19	Charities (names or codes) as column labels 1 mark …with full charity names displayed 1 mark Bidder details (number or name) as row headings 1 mark …with full names displayed 1 mark Cost of winning bid as values 1 mark …using Sum as mathematical operation 1 mark …all correct values displayed 1 mark Correct total for each person shown 1 mark Correct total for each charity shown 1 mark Text wrapped so single page wide 1 mark Appropriate numeric formatting (values in dollars with 2dp) 1 mark	**11**

Question	Answer	Marks
20	Appropriate counting method 1 mark …which counts only the three charity columns 1 mark 1st filter on counted cells 1 mark 2nd filter on >$20000 1 mark Column headings retained 1 mark Correct 4 records selected 1 mark	**6**
21	6 from: Solution uses multiple spreadsheets to remove duplicate data … 1 mark …which is more efficient than a single sheet 1 mark To extend the spreadsheet formulae would need to be replicated … 1 mark …this would need to be done manually/macro 1 mark Named ranges would offer a more efficient solution than absolute ref 1 mark Staff are likely to be more familiar with spreadsheet software 1 mark Only 1 person can add data at a time 1 mark	**6**
22	Relational database 1 mark 4 from: Multiple users can simultaneously edit data Referential integrity can be set but would make little difference to efficiency …as data is unlikely to require editing/much editing More staff expertise required to use a database than a spreadsheet Normalisation of data can be better applied to database solution Database uses crosstab query rather than pivot table in spreadsheet …although functionality of both is similar, crosstab is more flexible	**5**
23	Pie chart 1 mark Appropriate title 1 mark Correct percentages shown 1 mark Segments distinctive in black and white 1 mark Appropriate labels and/or legend with charity name in full 1 mark	**5**
24	With correct two segments (1 and 2 grouped together) 2 marks Award 1 mark if correct three segments present Appropriate title 1 mark Correct percentages shown 1 mark Correct values shown 1 mark Appropriate labels and/or legend 1 mark	**6**

Evidence 1

Video file TWT_1_

TWT_1_	Image ratio of software set to 16:9	1 mark
	End of video cut	1 mark
	Only 8–9 seconds of video remain (diver does not appear)	1 mark
	Title background set to 173turtle1.png	1 mark
	Title 5 seconds duration	1 mark
	Logo placed with transparency	1 mark
	Top right of background image and clearly visible	1 mark
	Title background full screen with no adjustment/movement	1 mark
	Additional 6 seconds duration	1 mark
	Title text Help us preserve the wonders of the oceans	1 mark
	Bottom left of image and clearly visible	1 mark
	Large easily read font with good contrast	1 mark
	Effect added for title animation	1 mark
	Effect added to give sufficient time to read text within the 6 seconds	1 mark
	Caption background set to 173turtle2.jpg	1 mark
	Appropriate image editing to amend aspect ratio	1 mark
	The image fills the full screen	1 mark
	Placed after video	1 mark
	Caption frames 7 seconds duration	1 mark
	Caption placed to right of turtle in a clearly visible font with good contrast	1 mark
	Caption text includes Tawara Wildlife Trust	1 mark
	2nd block includes Gala Dinner	1 mark
	3rd block includes 18th December 2017	1 mark
	Different effect added for caption animation	1 mark
	Clip placed as specified	1 mark
	Consistent animation used for all elements	1 mark
	Soundtracks removed from both clips	1 mark
	Snapshot of final frame extracted in appropriate format	1 mark
	…and set as background for credits	1 mark
	Credits 7 seconds duration	1 mark
Credits incl:	Filmed by	1 mark
	Location	1 mark
	Country	1 mark
	Appropriate blank line/s as spacing between credits	1 mark
	Candidate name and numbers in credits in appropriate format	1 mark
	Movie saved	1 mark
	In wmv format	1 mark

Audio file 173sound2.mp3

173sound2	End of clip removed	1 mark
	…cut to 51 seconds	1 mark
	Fade in present	1 mark
	…with appropriate duration for length of sound clip	1 mark
	Fade out present	1 mark
	…with appropriate duration for length of sound clip	1 mark
	Audio clip saved as 173sound2.mp3	1 mark

Video file TWT_2_

TWT_2_	Soundtrack added as specified	1 mark
	Movie saved in wmv format	1 mark

Video file TWT_3_

TWT_3_	Export or conversion of file type	1 mark
	In mp4 format	1 mark

Tasks 14–16

	A	B	C	D	E
1					
2	Lot number	Charity	Charity name	Cost of winning bid	Winning bidder number
3	1	AA	=VLOOKUP(B3,$H$3:$I$5,2,FALSE)	5950	35
4	2	THT	=VLOOKUP(B4,$H$3:$I$5,2,FALSE)	4490	10
5	3	THT	=VLOOKUP(B5,$H$3:$I$5,2,FALSE)	2190	1
6	4	TC	=VLOOKUP(B6,$H$3:$I$5,2,FALSE)	4290	28
7	5	THT	=VLOOKUP(B7,$H$3:$I$5,2,FALSE)		
8	6	AA	=VLOOKUP(B8,$H$3:$I$5,2,FALSE)	2460	
9	7	TC	=VLOOKUP(B9,$H$3:$I$5,2,FALSE)	5020	16
10	8	TC	=VLOOKUP(B10,$H$3:$I$5,2,FALSE)	5600	33
11	9	AA	=VLOOKUP(B11,$H$3:$I$5,2,FALSE)	1610	22
12	10	TC	=VLOOKUP(B12,$H$3:$I$5,2,FALSE)	700	10
13	11	TC	=VLOOKUP(B13,$H$3:$I$5,2,FALSE)	590	8
14	12	AA	=VLOOKUP(B14,$H$3:$I$5,2,FALSE)	2650	10
15	13	THT	=VLOOKUP(B15,$H$3:$I$5,2,FALSE)	2150	25
16	14	THT	=VLOOKUP(B16,$H$3:$I$5,2,FALSE)	6130	24
17	15	TC	=VLOOKUP(B17,$H$3:$I$5,2,FALSE)	1300	17
18	16	THT	=VLOOKUP(B18,$H$3:$I$5,2,FALSE)	4720	36
19	17	TC	=VLOOKUP(B19,$H$3:$I$5,2,FALSE)	2490	21
20	18	AA	=VLOOKUP(B20,$H$3:$I$5,2,FALSE)	6390	25
21	19	TC	=VLOOKUP(B21,$H$3:$I$5,2,FALSE)	6690	2
22	20	TC	=VLOOKUP(B22,$H$3:$I$5,2,FALSE)	1180	10
23	21	THT	=VLOOKUP(B23,$H$3:$I$5,2,FALSE)	4680	8
24	22	TC	=VLOOKUP(B24,$H$3:$I$5,2,FALSE)	3290	37
25	23	AA	=VLOOKUP(B25,$H$3:$I$5,2,FALSE)	6970	20
26	24	THT	=VLOOKUP(B26,$H$3:$I$5,2,FALSE)	3460	25
27	25	TC	=VLOOKUP(B27,$H$3:$I$5,2,FALSE)	5520	7

Charity name column

Column	Inserted in correct place	1 mark
Cell C2	Appropriate label	1 mark
Lookup	Function used	1 mark
Cell ref	Column B	1 mark
	Relative reference	1 mark
Correct range		
	173charity.csv	
	or copied cell range	1 mark
	Absolute reference	1 mark
Correct return col 2 with FALSE/sorted data		1 mark

Correct data file used		1 mark
Footer	Text 100% correct	1 mark

Auction item winners - last edited by: A Candidat

	F
1	Auction data
2	Winning bidder name
3	=VLOOKUP(E3,'173bidder.csv'!$A$2:$C$41,3,FALSE)&": "&VLOOKUP(E3,'173bidder.csv'!$A$2:$C$41,2,FALSE)
4	=VLOOKUP(E4,'173bidder.csv'!$A$2:$C$41,3,FALSE)&": "&VLOOKUP(E4,'173bidder.csv'!$A$2:$C$41,2,FALSE)
5	=VLOOKUP(E5,'173bidder.csv'!$A$2:$C$41,3,FALSE)&": "&VLOOKUP(E5,'173bidder.csv'!$A$2:$C$41,2,FALSE)
6	=VLOOKUP(E6,'173bidder.csv'!$A$2:$C$41,3,FALSE)&": "&VLOOKUP(E6,'173bidder.csv'!$A$2:$C$41,2,FALSE)
7	=VLOOKUP(E7,'173bidder.csv'!$A$2:$C$41,3,FALSE)&": "&VLOOKUP(E7,'173bidder.csv'!$A$2:$C$41,2,FALSE)
8	=VLOOKUP(E8,'173bidder.csv'!$A$2:$C$41,3,FALSE)&": "&VLOOKUP(E8,'173bidder.csv'!$A$2:$C$41,2,FALSE)
9	=VLOOKUP(E9,'173bidder.csv'!$A$2:$C$41,3,FALSE)&": "&VLOOKUP(E9,'173bidder.csv'!$A$2:$C$41,2,FALSE)
10	=VLOOKUP(E10,'173bidder.csv'!$A$2:$C$41,3,FALSE)&": "&VLOOKUP(E10,'173bidder.csv'!$A$2:$C$41,2,FALSE)
11	=VLOOKUP(E11,'173bidder.csv'!$A$2:$C$41,3,FALSE)&": "&VLOOKUP(E11,'173bidder.csv'!$A$2:$C$41,2,FALSE)
12	=VLOOKUP(E12,'173bidder.csv'!$A$2:$C$41,3,FALSE)&": "&VLOOKUP(E12,'173bidder.csv'!$A$2:$C$41,2,FALSE)
13	=VLOOKUP(E13,'173bidder.csv'!$A$2:$C$41,3,FALSE)&": "&VLOOKUP(E13,'173bidder.csv'!$A$2:$C$41,2,FALSE)
14	=VLOOKUP(E14,'173bidder.csv'!$A$2:$C$41,3,FALSE)&": "&VLOOKUP(E14,'173bidder.csv'!$A$2:$C$41,2,FALSE)
15	=VLOOKUP(E15,'173bidder.csv'!$A$2:$C$41,3,FALSE)&": "&VLOOKUP(E15,'173bidder.csv'!$A$2:$C$41,2,FALSE)
16	=VLOOKUP(E16,'173bidder.csv'!$A$2:$C$41,3,FALSE)&": "&VLOOKUP(E16,'173bidder.csv'!$A$2:$C$41,2,FALSE)
17	=VLOOKUP(E17,'173bidder.csv'!$A$2:$C$41,3,FALSE)&": "&VLOOKUP(E17,'173bidder.csv'!$A$2:$C$41,2,FALSE)
18	=VLOOKUP(E18,'173bidder.csv'!$A$2:$C$41,3,FALSE)&": "&VLOOKUP(E18,'173bidder.csv'!$A$2:$C$41,2,FALSE)
19	=VLOOKUP(E19,'173bidder.csv'!$A$2:$C$41,3,FALSE)&": "&VLOOKUP(E19,'173bidder.csv'!$A$2:$C$41,2,FALSE)
20	=VLOOKUP(E20,'173bidder.csv'!$A$2:$C$41,3,FALSE)&": "&VLOOKUP(E20,'173bidder.csv'!$A$2:$C$41,2,FALSE)
21	=VLOOKUP(E21,'173bidder.csv'!$A$2:$C$41,3,FALSE)&": "&VLOOKUP(E21,'173bidder.csv'!$A$2:$C$41,2,FALSE)
22	=VLOOKUP(E22,'173bidder.csv'!$A$2:$C$41,3,FALSE)&": "&VLOOKUP(E22,'173bidder.csv'!$A$2:$C$41,2,FALSE)
23	=VLOOKUP(E23,'173bidder.csv'!$A$2:$C$41,3,FALSE)&": "&VLOOKUP(E23,'173bidder.csv'!$A$2:$C$41,2,FALSE)
24	=VLOOKUP(E24,'173bidder.csv'!$A$2:$C$41,3,FALSE)&": "&VLOOKUP(E24,'173bidder.csv'!$A$2:$C$41,2,FALSE)
25	=VLOOKUP(E25,'173bidder.csv'!$A$2:$C$41,3,FALSE)&": "&VLOOKUP(E25,'173bidder.csv'!$A$2:$C$41,2,FALSE)
26	=VLOOKUP(E26,'173bidder.csv'!$A$2:$C$41,3,FALSE)&": "&VLOOKUP(E26,'173bidder.csv'!$A$2:$C$41,2,FALSE)
27	=VLOOKUP(E27,'173bidder.csv'!$A$2:$C$41,3,FALSE)&": "&VLOOKUP(E27,'173bidder.csv'!$A$2:$C$41,2,FALSE)

Winning bidder name column
Lookup with relative ref to E? 1 mark
Range – external file link to 173bidder.csv 1 mark
Correct range A2:C41 with absolute ref 1 mark
Return col 3 & FALSE / sorted data set 1 mark
Concatenate or & 1 mark
Text ": " 1 mark
Second & or correct syntax for concatenate 1 mark
Second lookup with reference to column 2 1 mark

Replication
2 columns to row 122 1 mark

Auction item winners - last edited by: A Candidate, ZZ999, 9999

	H	I
1		
2		
3	TC	Turtleweek Conservation
4	THT	Tawara Hospital Trust
5	AA	Age Assistance
6		
7		
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25		
26		
27		

Auction item winners - last edited by: A Candidate, ZZ999, 9999

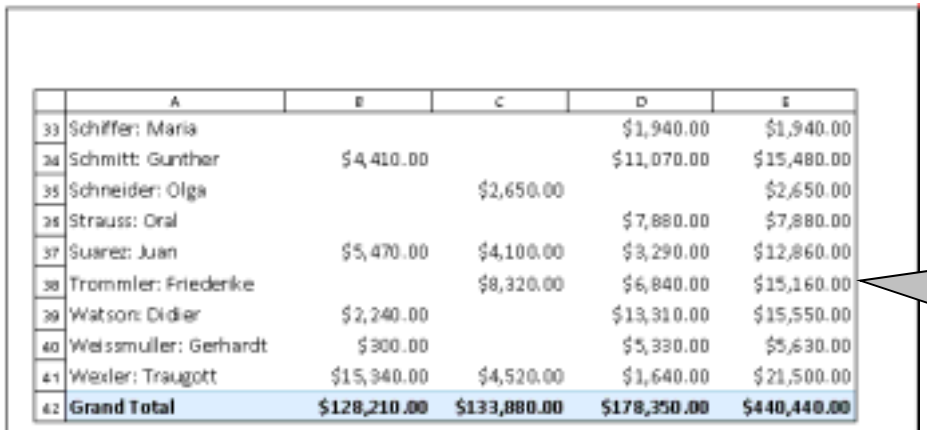
	A	B	C	D	E	F
1	Auction data					
2	Lot number	Charity	Charity name	Cost of winning bid	Winning bidder number	Winning bidder name
3	1	AA	Age Assistance	$5,950.00	35	Wexler: Traugott
4	2	THT	Tawara Hospital Trust	$4,490.00	10	Pushing: Pat
5	3	THT	Tawara Hospital Trust	$2,190.00	1	Gupta: Kratika
6	4	TC	Turtleweek Conservation	$4,290.00	28	Schmitt: Gunther
7	5	THT	Tawara Hospital Trust	$970.00	5	Jacobs: Tomas
8	6	AA	Age Assistance	$2,460.00	24	Jenkinson: Holly
9	7	TC	Turtleweek Conservation	$5,020.00	16	Beyer: Friedhelm
10	8	TC	Turtleweek Conservation	$5,600.00	33	Royle: Michael
11	9	AA	Age Assistance	$1,610.00	22	Pinoir: Jeremy
12	10	TC	Turtleweek Conservation	$700.00	10	Pushing: Pat
13	11	TC	Turtleweek Conservation	$590.00	8	Chase: Holly
14	12	AA	Age Assistance	$2,650.00	10	Pushing: Pat
15	13	THT	Tawara Hospital Trust	$2,150.00	25	Lopez: Eugenio
16	14	THT	Tawara Hospital Trust	$6,130.00	24	Jenkinson: Holly
17	15	TC	Turtleweek Conservation	$1,300.00	17	Bayer: Evert
18	16	THT	Tawara Hospital Trust	$4,720.00	36	Lopez: Rafael
19	17	TC	Turtleweek Conservation	$2,490.00	21	Fernandez: Toni
20	18	AA	Age Assistance	$6,390.00	25	Lopez: Eugenio
21	19	TC	Turtleweek Conservation	$6,690.00	2	Watson: Didier
22	20	TC	Turtleweek Conservation	$1,180.00	40	Platt: Karthilene
23	21	THT	Tawara Hospital Trust	$4,680.00	8	Chase: Holly
24	22	TC	Turtleweek Conservation	$3,290.00	37	Suarez: Juan
25	23	AA	Age Assistance	$6,970.00	20	Miller: Suzanne
26	24	THT	Tawara Hospital Trust	$3,460.00	25	Lopez: Eugenio
27	25	TC	Turtleweek Conservation	$5,520.00	7	Gad: Siddharth
28	26	AA	Age Assistance	$1,420.00	6	Cotterill: Elliot
29	27	TC	Turtleweek Conservation	$4,640.00	20	Miller: Suzanne
30	28	TC	Turtleweek Conservation	$1,250.00	7	Gad: Siddharth

Auction item winners - last edited by: A Candidate, ZZ999, 9999

Spreadsheet formatting

Text wrapped so single page wide	1 mark
Appropriate title formatting	1 mark
Appropriate numeric formatting	1 mark
Page layout set to A4 and portrait and 12pt font	1 mark

	A	B	C	D	E
1	Sum of Cost of winning bid	Column Labels			
2	Row Labels	Age Assistance	Tawara Hospital Trust	Turtleweek Conservation	Grand Total
3	Bayer: Evert			$8,200.00	$8,200.00
4	Beyer: Friedhelm			$5,020.00	$5,020.00
5	Blenkinsop: Lydia	$4,240.00	$450.00		$4,690.00
6	Castro: Victor	$10,490.00	$240.00	$560.00	$11,290.00
7	Chase: Holly	$13,670.00	$7,160.00	$6,600.00	$27,430.00
8	Claes: Louis			$4,080.00	$4,080.00
9	Cotterill: Elliot	$3,530.00		$760.00	$4,290.00
10	Dhiman: Kratika		$7,500.00	$11,320.00	$18,820.00
11	Fernandez: Toni	$2,160.00	$10,390.00	$2,490.00	$15,040.00
12	Gad: Siddharth	$1,920.00	$4,350.00	$6,770.00	$13,040.00
13	Garrido: Pablo	$3,530.00			$3,530.00
14	Gupta: Kratika		$2,190.00		$2,190.00
15	Hegde: Fatima	$5,880.00	$4,620.00	$1,370.00	$11,870.00
16	Jacobs: Tomas		$2,110.00		$2,110.00
17	Jenkinson: Holly	$2,460.00	$19,520.00		$21,980.00
18	Jolley: Sharon	$6,920.00			$6,920.00
19	Kelly: Peter	$6,690.00		$6,480.00	$13,170.00
20	Lopez: Eugenio	$12,510.00	$7,640.00	$2,480.00	$22,630.00
21	Lopez: Rafael		$12,770.00	$13,880.00	$26,650.00
22	Lopez: Teresa			$3,490.00	$3,490.00
23	Miller: Suzanne	$6,970.00		$4,640.00	$11,610.00
24	Nicolaides: Nikos	$5,170.00			$5,170.00
25	Pagan: Pilar	$1,500.00	$13,180.00	$4,130.00	$18,810.00
26	Perfection: Peter		$920.00		$920.00
27	Pinoir: Jeremy	$2,550.00	$9,940.00	$14,520.00	$27,010.00
28	Platt: Karthilene		$1,950.00	$1,180.00	$3,130.00
29	Pushing: Pat	$6,060.00	$4,490.00	$8,130.00	$18,680.00
30	Roberts: Jim			$5,840.00	$5,840.00
31	Roth: Karl	$4,200.00		$9,510.00	$13,710.00
32	Royle: Michael		$4,870.00	$5,600.00	$10,470.00



	A	B	C	D	E
33	Schiffer: Maria			$1,940.00	$1,940.00
34	Schmitt: Gunther	$4,410.00		$11,070.00	$15,480.00
35	Schneider: Olga		$2,650.00		$2,650.00
36	Strauss: Oral			$7,880.00	$7,880.00
37	Suarez: Juan	$5,470.00	$4,100.00	$3,290.00	$12,860.00
38	Trommler: Friederike		$8,320.00	$6,840.00	$15,160.00
39	Watson: Didier	$2,240.00		$13,310.00	$15,550.00
40	Weissmuller: Gerhardt	$300.00		$5,330.00	$5,630.00
41	Wexler: Traugott	$15,340.00	$4,520.00	$1,640.00	$21,500.00
42	**Grand Total**	**$128,210.00**	**$133,880.00**	**$178,350.00**	**$440,440.00**

Pivot table

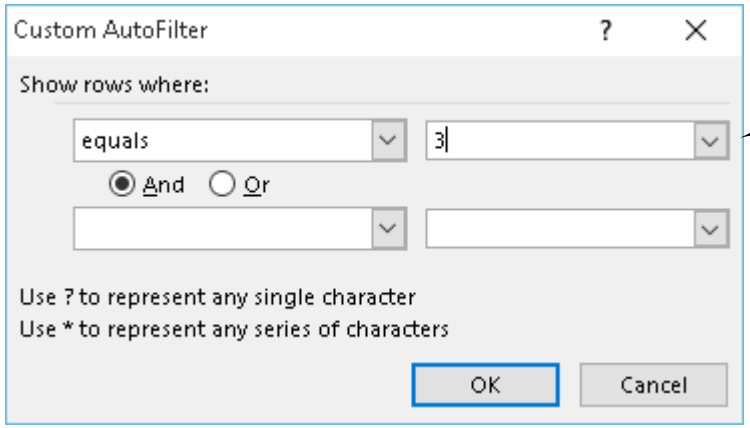
Charities (names or codes) as column labels	1 mark
…with full charity names	1 mark
Bidder details as row headings	1 mark
…with full names displayed	1 mark
Cost of winning bid as values	1 mark
… using Sum as mathematical operation	1 mark
…all correct values displayed	1 mark
Correct total for each person shown	1 mark
Correct total for each charity shown	1 mark
Text wrapped so single page wide	1 mark
Appropriate numeric formatting	1 mark

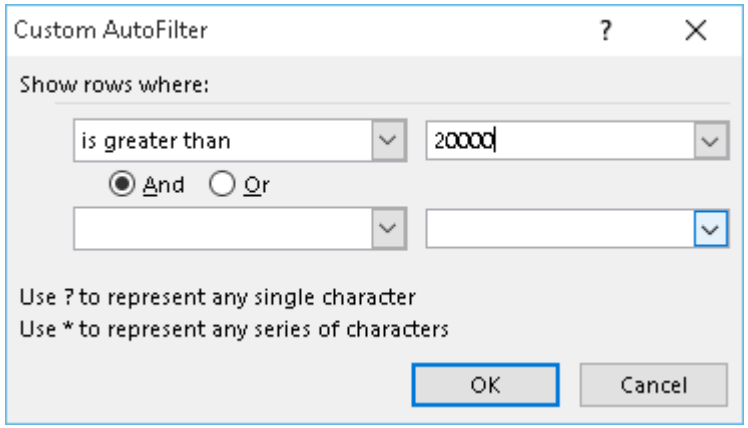
Evidence 7

	A	B	C	D	E	F
1	**Sum of Cost of winning bid**	**Column Labels**				
7	Chase: Holly	13670	7160	6600	27430	=COUNT(B7:D7)
20	Lopez: Eugenio	12510	7640	2480	22630	=COUNT(B20:D20)
27	Pinoir: Jeremy	2550	9940	14520	27010	=COUNT(B27:D27)
41	Wexler: Traugott	15340	4520	1640	21500	=COUNT(B41:D41)

Pivot table extract

Appropriate counting method	1 mark
… which counts only the three charity columns	1 mark





Pivot table extract

1st filter on counted cells	1 mark
2nd filter on >$20000	1 mark

Evidence 8

	A	B	C	D	E	F
1	Sum of Cost of winning bid	Column Labels				
2	Row Labels	Age Assistance	Tawara Hospital Trust	Turtleweek Conservation	Grand Total	.
7	Chase: Holly	$13,670.00	$7,160.00	$6,600.00	$27,430.00	3
20	Lopez: Eugenio	$12,510.00	$7,640.00	$2,480.00	$22,630.00	3
27	Pinoir: Jeremy	$2,550.00	$9,940.00	$14,520.00	$27,010.00	3
41	Wexler: Traugott	$15,340.00	$4,520.00	$1,640.00	$21,500.00	3

Pivot table extract
Column headings retained 1 mark
Correct 4 records selected 1 mark

Evidence 9
6 from:
Solution uses multiple spreadsheets to remove duplicate data …
…which is more efficient than a single sheet
To extend the spreadsheet formulae would need to be replicated …
…this would need to be done manually/macro
Named ranges would offer a more efficient solution than absolute ref
Staff are likely to be more familiar with spreadsheet software
Only 1 person can add data at a time
…although functionality of both is similar, crosstab is more flexible

1 mark each
Max 6

Evidence 10

Relational database **1 mark**

4 from:

Multiple users can simultaneously edit data

Referential integrity can be set but would make little difference to efficiency

…as data is unlikely to require editing/much editing

More staff expertise required to use a database than a spreadsheet

Normalisation of data can be better applied to database solution

Database uses crosstab query rather than pivot table in spreadsheet

…although functionality of both is similar, crosstab is more flexible

1 mark each
Max 4

Evidence 11

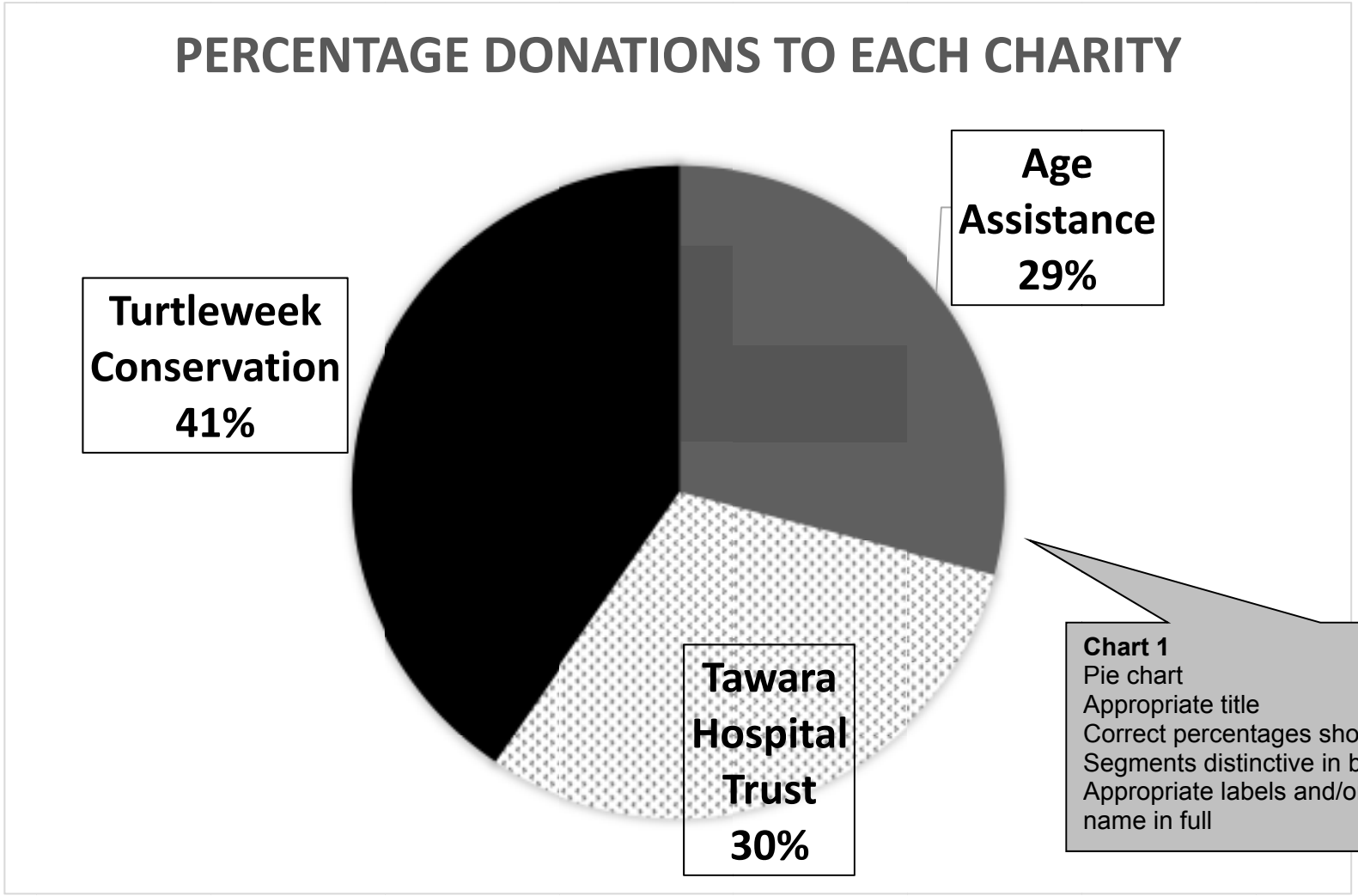


Chart 1	
Pie chart	1 mark
Appropriate title	1 mark
Correct percentages shown	`1 mark
Segments distinctive in black and white	1 mark
Appropriate labels and/or legend with charity name in full	1 mark

Evidence 12

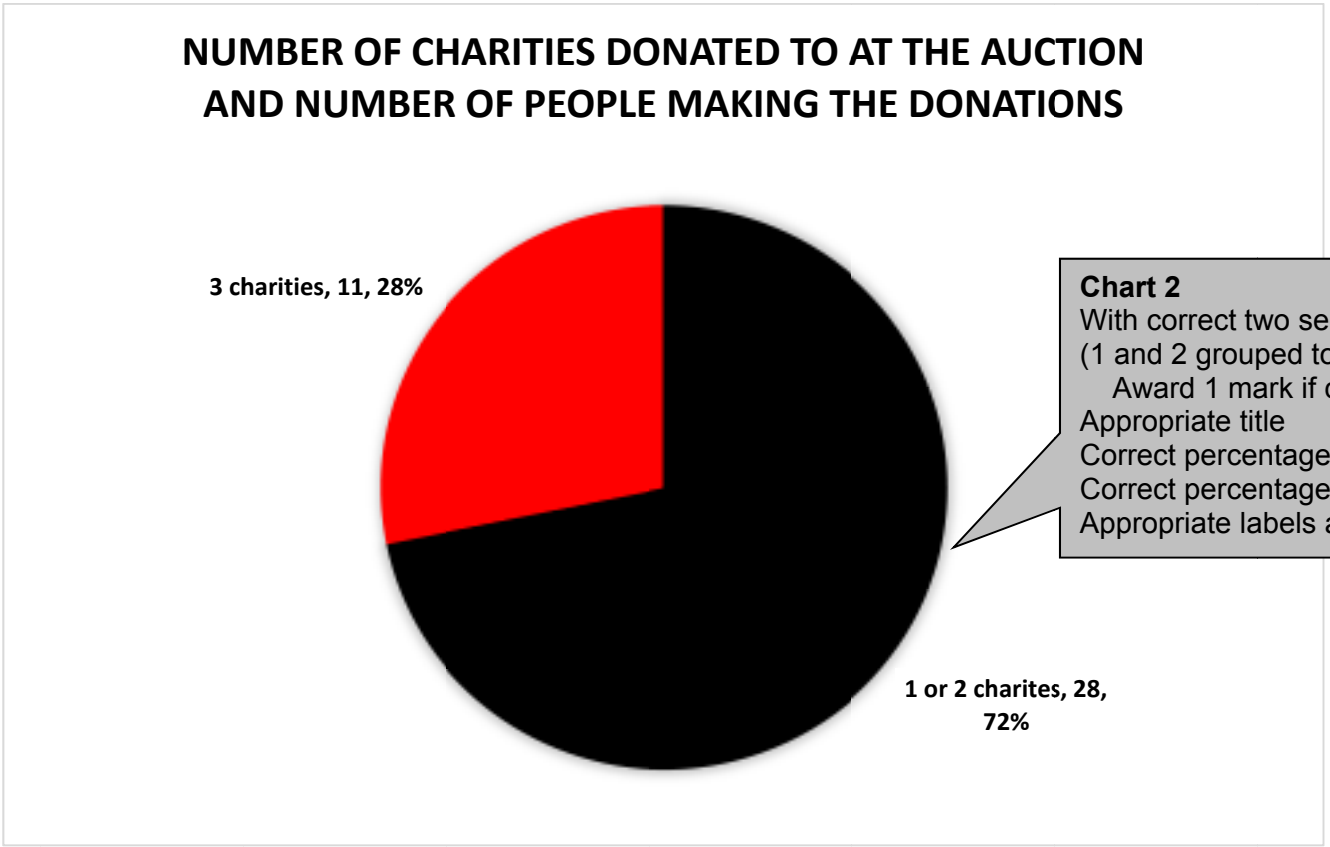


Chart 2

With correct two segments (1 and 2 grouped together)	2 marks
Award 1 mark if correct three segments present	
Appropriate title	1 mark
Correct percentages shown	1 mark
Correct percentage values shown	1 mark
Appropriate labels and/or legend	1 mark