



Free-Standing Mathematics Qualifications

Making Sense of Data *6983/2*

Mark Scheme

2006 examination - June series

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation meeting attended by all examiners and is the scheme which was used by them in this examination. The standardisation meeting ensures that the mark scheme covers the candidates' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for the standardisation meeting each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed at the meeting and legislated for. If, after this meeting, examiners encounter unusual answers which have not been discussed at the meeting they are required to refer these to the Principal Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of candidates' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

Key to mark scheme and abbreviations used in marking

M	mark is for method		
m or dM	mark is dependent on one or more M marks and is for method		
A	mark is dependent on M or m marks and is for accuracy		
B	mark is independent of M or m marks and is for method and accuracy		
E	mark is for explanation		
√ or ft or F	follow through from previous		
	incorrect result	MC	mis-copy
CAO	correct answer only	MR	mis-read
CSO	correct solution only	RA	required accuracy
AWFW	anything which falls within	FW	further work
AWRT	anything which rounds to	ISW	ignore subsequent work
ACF	any correct form	FIW	from incorrect work
AG	answer given	BOD	given benefit of doubt
SC	special case	WR	work replaced by candidate
OE	OE	FB	formulae book
A2,1	2 or 1 (or 0) accuracy marks	NOS	not on scheme
-x EE	deduct x marks for each error	G	graph
NMS	no method shown	c	candidate
PI	possibly implied	sf	significant figure(s)
SCA	substantially correct approach	dp	decimal place(s)

Application of Mark Scheme

No method shown:

Correct answer without working
 Incorrect answer without working

mark as in scheme
 zero marks unless specified otherwise

More than one method / choice of solution:

2 or more complete attempts, neither/none crossed out

mark both/all fully and award the mean
 mark rounded down

1 complete and 1 partial attempt, neither crossed out

award credit for the complete solution only

Crossed out work

do not mark unless it has not been replaced

Alternative solution using a correct or partially correct method

award method and accuracy marks as
 appropriate

Free-Standing Mathematics Qualification
Foundation Level – Making Sense of Data (6983/2)
Answers and Marking Scheme

Question 1

(a)	£116	B1	Accept BMW
(b)	£59	B1	Accept Seat
(c)	£57	B1 ft	
(d)	Arranged in order	M1	
	Between £82 and £83	B1	Not £83
	Median is £82.50	A1	Penalise 82.5 once in paper
(e)	Mean is $(100 + 83 + 116 + 76 + 72 + 59 + 65 + 82 + 112 + 100) / 10$	M1	
	$= \frac{865}{10}$	B1	(865)
	=£86.50	A1	
(f)	£100	B1	
(g)	A few large values affect the mean but not the median	B1	
	TOTAL	11	

Question 2

	Angle for 'landline' is $\frac{88}{225} \times 360$	M1	Any angle
	= 140.8°	A1	Accept 141 or 140
	Other angles are 99°, 85°, 35°	A1	99 or 100; 84 or 85; 35 or 36 (last one could be rounded for 360°)
	Construction of pie chart; accuracy, labels	B1	Allow $\pm 2^\circ$
	TOTAL	4	

Question 3

	Label axes and bars	B1	
	Accurate heights	B1	
	Suitable scale and correct 5 stories	B1	
	TOTAL	3	

Question 4

(a)	$\frac{5}{100}$	B1	
	$= \frac{1}{20}$	B1	
(b)	$\frac{9}{100} \times 1200$	M1	Or 120 – 12
	$= 108$	A1	
	TOTAL	4	

Question 5

	5 parts	B1	
	Girls: $\frac{4}{5} \times 40$	M1	
	$= 32$	A1	SC2 8 or 8 and 32
	TOTAL	3	

Question 6

	A	B	C	D	E
1	Product	UK price	Country in which item was cheapest	Cheapest price	Saving on the UK price if bought at the cheapest price
2	Designer jeans	£49.99	France	£30.58	£19.41
3	Perfume (50 ml)	£39.50	USA	£18.83	£20.67
4	Milk (2 litres)	£1.08	France	72p	36p
5	Digital camera	£280	USA	£245	£35
6	Designer sunglasses	£130	France	£76.60	£53.40
7	Electric toothbrush	£16.99	UK	£16.99	0

(a)	Column C	B1	
	Column D	B1	Allow 1 error in D2, D3 or D7
	Column E	B2	B1 for 4 correct
(b)	Percentage = $\frac{35}{280} \times 100$	M1	
	$= 12.5\%$	A1	87.5% SC1
	TOTAL	6	

Question 7

(a)	Percentage is $\frac{12}{40} \times 100$	B1	
	= 30%	B1	30 people; first B1 only
(b)	Completion of tally	B2	B1 for 2 correct
(c)	Total frequency is 43	B1	
(d)	No; not random population on train	B1	
(e)	Use of symbols	B1	
	Correct number of symbols	B1	
	Key and label	B1	Not 1 symbol for 1 person
	TOTAL	9	
	GRAND TOTAL	40	