

Edexcel GCSE

Mathematics 2381

Paper 5381F/05

March 2008

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Mark Scheme

NOTES ON MARKING PRINCIPLES

1 Types of mark

M marks: method marks

A marks: accuracy marks

B marks: unconditional accuracy marks (independent of M marks)

2 Abbreviations

cao - correct answer only

ft - follow through

isw - ignore subsequent working

SC: special case

oe - or equivalent (and appropriate)

dep - dependent

indep - independent

3 No working

If no working is shown then correct answers normally score full marks

If no working is shown then incorrect (even though nearly correct) answers score no marks.

4 With working

If there is a wrong answer indicated on the answer line always check the working in the body of the script (and on any diagrams), and award any marks appropriate from the mark scheme.

If it is clear from the working that the "correct" answer has been obtained from incorrect working, award 0 marks. Send the response to review, and discuss each of these situations with your Team Leader.

Any case of suspected misread loses A (and B) marks on that part, but can gain the M marks. Discuss each of these situations with your Team Leader.

If working is crossed out and still legible, then it should be given any appropriate marks, as long as it has not been replaced by alternative work.

If there is a choice of methods shown, then no marks should be awarded, unless the answer on the answer line makes clear the method that has been used.

If there is no answer on the answer line then check the working for an obvious answer.

5 Follow through marks

Follow through marks which involve a single stage calculation can be awarded without working since you can check the answer yourself, but if ambiguous do not award.

Follow through marks which involve more than one stage of calculation can only be awarded on sight of the relevant working, even if it appears obvious that there is only one way you could get the answer given.

- 6 Ignoring subsequent work**
It is appropriate to ignore subsequent work when the additional work does not change the answer in a way that is inappropriate for the question: eg. incorrect cancelling of a fraction that would otherwise be correct
It is not appropriate to ignore subsequent work when the additional work essentially makes the answer incorrect eg algebra.
Transcription errors occur when candidates present a correct answer in working, and write it incorrectly on the answer line; mark the correct answer.
- 7 Probability**
Probability answers must be given as fractions, percentages or decimals. If a candidate gives a decimal equivalent to a probability, this should be written to at least 2 decimal places (unless tenths). Incorrect notation should lose the accuracy marks, but be awarded any implied method marks.
If a probability answer is given on the answer line using both incorrect and correct notation, award the marks.
If a probability fraction is given then cancelled incorrectly, ignore the incorrectly cancelled answer.
- 8 Linear equations**
Full marks can be gained if the solution alone is given on the answer line, or otherwise unambiguously indicated in working (without contradiction elsewhere). Where the correct solution only is shown substituted, but not identified as the solution, the accuracy mark is lost but any method marks can be awarded.
- 9 Parts of questions**
Unless allowed by the mark scheme, the marks allocated to one part of the question CANNOT be awarded in another.

FINAL VERSION
GCSE MATHEMATICS - MARCH 2008
5381F/05 - MARK SCHEME

5381F/5A					
Question		Working	Answer	Mark	Notes
A1	(a)		A	1	B1
	(b)		C	1	B1
A2	(a)		3, 6, 4, 3, 2	2	B2 for all frequencies correct (B1 for 3 frequencies or 3 tallies correct or one tally with its frequency correct)
	(b)		3	1	B1 for 3 or "3" f.t.
	(c)		14	1	B1 for 14 or "14" f.t.
A3	(a)		6	1	B1 accept in words
	(b)		September	1	B1 accept abbreviations (ignore spelling)
A4		Motorcycle 45° Car 144° Bus 99° Other 72°	Pie chart	3	B3 for fully correct, labelled pie chart, angles $\pm 2^\circ$ (B2 for correct angles with no labels or for one angle drawn correctly and labelled) (B1 for 1 angle correctly drawn and not labelled or for correct angles in table or sight of $360 \div 40$ or $45 \div 5$ or sight of 9°)
A5		$(20 \times 5) + (32 \times 15) + (14 \times 25) + (9 \times 35) + (5 \times 45)$ $= 100 + 480 + 350 + 315 + 225$ $1470 \div 80 = 18.375$	18.4	4	M1 for $f \times$ consistent part of interval condone 2 errors M1 for $f \times$ mid interval (allow 2 arithmetic errors) M1 (dep on first M1) for "1470" $\div 80$ A1 for 18.4 or better

FINAL VERSION
GCSE MATHEMATICS - MARCH 2008
5381F/05 - MARK SCHEME

5381F/5B				
Question	Working	Answer	Mark	Notes
B1	(a) (b) (c)	14 5 2 bars	1 1 2	B1 B1 B1 for correct bar showing 9 boys (nearer 9 than 10 and nearer 9 than 8) B1 for correct bar showing 6 girls If no shading or labelling shown, award marks for correct column heights in order of given bars. Award marks for correct bars in wrong order if labelling or shading shown
	(d)	Tuesday	1	B1
B2		(FP), FA, FB, LA, LB, LP, SA, SB, SP	2	B2 for all 9 correct allow no duplicates or extras (B1 for 4 correct pairs i.e. (FP) and 3 more, allow duplicates as long as there are 4 correct pairs)
B3	(a)	1 (4) (5), (2) 2 4 , 2 (0) 2 , 5 6 (11)	2	B3 for all 7 missing values correct (B2 for 5 or 6 missing values correct) (B1 for 3 or 4 missing values correct or 2 bottom row numbers total to 11) B2 accept as recurring decimal 0.3636...
	(b)	$\frac{4}{11}$	2	(B1 for denominator of 11, $\left(\frac{n}{11}\right)$ or numerator of 4, $\left(\frac{4}{n}\right)$ or decimal written as 0.36)
B4		2 3 5 3 1 2 7 8 4 0 6 8 9 5 6 6 key 2 1 = 21	3	M1 for unordered stem and leaf diagram (condone 2 errors, 1 number misplaced counts as 1 error) A1 for correctly ordered and fully correct diagram B1 for key e.g. key $\begin{array}{c} 2 \\ \\ 1 \end{array} = 21$ Note: award marks if there are commas between leaves