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Mark Scheme (Results)

March 2011

GCSE

GCSE Mathematics (Modular) - 2381
Paper: 5381F/5A

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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
isw – ignore subsequent working
oe – or equivalent (and appropriate)
indep - independent
ft – follow through
SC: special case
dep – dependent

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If working is crossed out and still legible, then it should be given any appropriate marks, as long as it has not been replaced by alternative work.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 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.
If there is no answer on the answer line then check the working for an obvious answer.
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 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.

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: e.g. incorrect canceling 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 e.g. 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 a 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.

10 Money notation

Accepted with and without the “p” at the end.

11 Range of answers

Unless otherwise stated, when any answer is given as a range (e.g 3.5 – 4.2) then this is inclusive of the end points (e.g 3.5, 4.2) and includes all numbers within the range (e.g 4, 4.1).

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Question		**Working**	**Answer**	**Mark**	**Notes**
1	(a)	5×20	100	1	B1 cao
	(b)	$20 + 10$	30	1	B1 for answer in range $28 - 35$ (whole number)
2	(a)		Even	1	B1 for even
	(b)		Impossible	1	B1 for impossible
3	(a)		Adams, Singh	1	B1 for both Adams and Singh
	(b)		Brown	1	B1 cao
4	(a)		(W,R), (W,G), (W,P), (W,Y), (B,R), (B,G), (B,P), (B,Y)	2	B2 for 8 correct combinations and no incorrect responses; ignore duplicates (B1 for at least 4 correct combinations and no more than 2 incorrect combinations; ignore duplicates)
	(b)		$\frac{1}{8}$ oe	1	B1 for $\frac{1}{8}$ oe or ft from their combinations

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Question	**Working**	**Answer**	**Mark**	**Notes**
5	$75+54+291+120=540$ e.g. Soya = $\frac{75}{540}\times 360=50$ Full fat = 36 Semi skimmed = 194 Skimmed = 80	Pie chart	3	B3 for a fully correct and labeled pie chart – at least **three** angles must be correct (tolerance of ±2°) **use overlay or angle measure** [B2 for a correct pie chart (at least 3 angles correct with tolerance of $\pm 2°$) with no or incorrect labels **or** for 2 correct sectors ($\pm 2°$)] [B1 for one correct sector ($\pm 2°$) **or** for a clear method (eg. $\frac{75}{'540'}\times 360$) to find the size of one angle – this may be implied by the sight of a correct angle $50°$ **or** $36°$ **or** $194°$ **or** $80°$]
6	$[(4\times 75)+(6\times 125)+(10\times 75)+$ $(18\times 225)+(12\times 275)]\div 50=$ $(300+750+1750+4050+3300)\div 50$ $10150\div 50$	203	3	M1 for $f\times x$ with x used consistently within intervals or at either end (condone 1 arithmetic error or 1 incorrect midpoint) M1 (dep) for $'10150'\div(4+6+10+18+12)$ A1 cao

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