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Mark Scheme (Results)

November 2010

GCSE

GCSE Mathematics (5383F)
Paper 09

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If working is crossed out and still legible, then it should be given any appropriate marks, as long as it has not been replaced by alternative work.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

Unless otherwise stated, when an 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)

5383F/09					
Question		**Working**	**Answer**	**Mark**	**Notes**
1			35.50	2	M1 for 3.55×10 (implied by 35.5 or 35.5p) or the addition of 10 lots of 3.55 or 3550 A1 for £35.50 or £35.50p
2	(a)		Radius	1	B1 Radius drawn; approximate straight line, ends ±2 mm
	(b)		Semicircle, or segment or sector	1	B1 Semicircle, segment or sector; allow poor spellings that are not ambiguous
3	(a)		9 or 16	1	B1 Accept either 9 or 16 or both.
	(b)		8 or 27	1	B1 Accept either 8 or 27 or both.
4		4 × 1.29 = 5.16 5.16 + 3.90 = 9.06 20 - 9.06 = Or 20 - 4 × 1.29 −3.90	10.94	3	M1 for 4× 1.29 or 5.16 seen or 1.29+1.29+1.29+1.29 or 4 ×1.29 + 5.16 or 9.06 seen Either M1 for 20 −(“5.16”+3.90) OR 20-(1.29+3.90) or M1 for an answer which when added to their total (which must have earned the previous M1) gives 20 A1 for 10.94 Or M2 20 - 4 × 1.29 −3.90 A1 for 10.94 SC B2 for 14.81 or B1 for 2.86 if M0 scored.
5	(a)		miles	1	B1 accept unambiguous abbreviations
	(b)		kilometres	1	B1 accept unambiguous abbreviations

Question	Working	Answer	Mark	Notes
6 (a)		$6n$	1	B1 for $6n$, $6\times n$, $n6$, $n\times 6$ etc. Accept N for n
(b)		$6n-3$	1	B1 for "$6n$"-3 oe where the "$6n$" must have a term in n or must use the same letter as in their answer in (a)
7 (a)	$\underline{73.8234}$ 22.2467	3.3183(978)	2	B2 for 3.3183(977... or 3.3184 (B1 for 73.82(34) or 22.24(67)(rounded or truncated)) or $\frac{105462}{31781}$ or $3\frac{10119}{31781}$ or 3.31, 3.32, 3.318)
(b)		3	1	B1 ft rounding to 1 s.f. NB: B0 for 3.0
8		$x^2 + 2x$	1	B1 Allow $x\times x + 2\times x$
9 (a)	(-3), 0, 3, (6), 9	0,3,9	2	B2 for all three correct (B1 for one or two correct)
(b)	Line	Line	2	B2 correct line from (-2,-3) to (2,9) (B1 ft (dep on at least B1 in (a)) for plotting at least 4 points (tol ±1 sq) OR single line of gradient 3, or single line intercept at (0,3))
10 (a)	60 ÷ (4 × 5) = 60 ÷ 20, or 4 × 5 × 3	3	2	M1 for 60 ÷ (4 × 5) or 60 ÷ 20 or 4 × 5 × 3 or (60÷4) ÷ 5 (condone omission of brackets) oe A1 cao
(b)	534 ÷ 60	8.9	2	M1 for 534 ÷ 60 A1 cao

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