

GCSE

Edexcel GCSE

Mathematics B 1388

Paper 5534/ 14

Summer 2005

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Mark Scheme (Results)

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If working is crossed out and still legible, then it should be given any appropriate marks, as long as it has not been replaced by alternative work.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

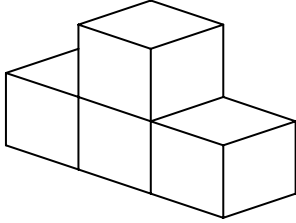
**9 Parts of questions**

Unless allowed by the mark scheme, the marks allocated to one part of the question CANNOT be awarded in any other part.

Paper 5534/14				
No	Working	Answer	Mark	Notes
1	(a)	17252	1	B1 cao
	(b)	5400	1	B1 cao
	(c)	thousands, 1000, 4000	1	B1
2	(a)	April & May	1	B1 for both
	(b)	Daffodil	1	B1
	(c)	Feb	1	B1
	(d)	Crocus	1	B1
3	(a)	18, 69	1	B1
	(b)(i)	18 or 36	1	B1
	(ii)	16 or 36	1	B1
	(c)	factor	1	B1 Could be indicated in the box
	(d)(i)	18	3	B1
	(ii)	11 or 88		B1
	(iii)	69		B1
4	(a)	hexagon	1	B1 Condone spelling error
	(b)	Sum of angles at a point is $360^\circ$	2	B1 for 360 seen B1 for “point”, “complete turn” or “a circle” or similar unless accompanied by an incorrect angle SC If neither B1 scored, award B1 for a clear indication that the size of an angle, other than $x$ , is $90^\circ$ or a right angle (may be on diagram)
	(c)	$30 \times 4 + 8 \times 2$  136	2	M1 $30 \times 4 + 8 \times 2$ or attempt to sum 5 or 6 lengths A1 cao

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No	Working	Answer	Mark	Notes
5	(a) (b) (c)	13, 67, 76, 103, 130 -7, -3, -1, 0, 5 0.6, $\frac{2}{3}$ , 70%, $\frac{3}{4}$	5	B1 cao B1 cao B2 (B1 for any 3 in correct order)
6	(a) (b) (c)	40/100  7 500 000 60	2 1 1	B2 for $\frac{2}{5}$ (B1 for 40/100 or 4/10 or 20/50 or 8/20 or 10/25) B1 B1
7		$6 \text{ cm}^2$	3	B2 for 6 (B1 for $5.5 < \text{Area} \leq 7$ ) then B1 (indep) for $\text{cm}^2$
8	(a)  (b)  (c)	$(4 + 3) \times 10$  $(? + 3) \times 10 = 120$ or $120 \div 10 - 3$  $C = 10(n + 3)$	2  2  <hr/> 3 <hr/>	M1 $(4 + 3) \times 10$ A1 cao  M1 eg for $\frac{120}{10}$ or 12 seen A1 cao  B3 for $C = 10(n + 3)$ oe such as $C = (n + 3) \times 10$  (B2 for correct RHS or $C = n + 3 \times 10$ , $C = 10n + 3$ etc B1 for $C = \text{some other linear expression in } n$ or $n + 3 \times 10$ , $10n + 3$ etc) NB: $C = n$ scores no marks

Paper 5534/14				
No	Working	Answer	Mark	Notes
9	(a)	<b>-4</b> -1 <b>+2</b> +5 <b>+8</b> graph	2	B2 for correct table (B1 for 2 correct)
	(b)		2	B2 for a correct line (B1 for all “points” plotted correctly)
10		<b>15</b> <b>11</b> <b>13</b> <b>39</b> <b>16</b> 17 <b>8</b> <b>41</b> 31 28 <b>21</b> 80	4	B4 for 8 correct (B3 for 5,6 or 7 correct) (B2 for 3 or 4 correct) (B1 for 1 or 2 correct) S.C B2 for only 39 <b>and</b> 15 correct
11	(a)	$60 \times \frac{2}{3}$	2	M1 for $60 \times 2$ or 120 seen or $60 \div 3$ or 20 seen A1 cao
	(b)	$5 \times 9 - 7 = 45 - 7$	2	M1 for $3 \times 3 (=9)$ or 45 seen A1 cao
	(c)	8pq	1	B1 accept in any order but must not include $\times$

Paper 5534/14				
No	Working	Answer	Mark	Notes
12		Correct drawing	2	<p>B2. Condone hidden detail shown with solid lines, or missing lines on front face.</p> <p>(B1 for :  one sketch correct with other sketches incorrect  cross-section correct with depth &gt; 1 cube,  correct plan and side elevation)</p>
13	$\frac{600}{3 \times 10} \text{ or } \frac{640}{3.2 \times 10}$	$20 \text{ to } 21 \frac{1}{3}$	2	<p>M1 For rounding at least two of the numbers to 1 sf,  or for sight of    640, 3.2    or    640, 32                           or 600, 32    or    30 seen</p> <p>A1 for 20 to 21 <math>\frac{1}{3}</math></p> <p>NB: 20.3125 scores M0 A0</p>

Paper 5534/14				
No	Working	Answer	Mark	Notes
14	(a)			
	$4 \times 3 - 2 \times 1$	10	3	M1 for $3 \times 4 (=12)$ or $1 \times 2$ or attempt to divide diagram up into rectangles
	$12 - 2$			M1 "12" – "2"
				A1 cao
	(b)(i)			
	$\frac{10}{100} \times 680$ or $680 \div 10$	748	5	M1 $\frac{10}{100} \times 680$ or $680 \div 10$ or 68 seen
	$680 + 68$			M1 (dep) for $680 + "68"$ (or M2 for $680 \times 1.10$ )
				A1 cao
	(ii)			
	"748" $\div 50$ or 14.96	15		M1 for "748" $\div 50$ or 14.96; accept "748" rounded up or down to next 50 followed by $\div 50$
				A1 ft from (b)(i) rounded up
				SC B1 for 680 (seen) leading to 14



