AQA

ASSESSMENT and
QUALIFICATIONS
ALLIANCE

General Certificate of Secondary Education

Mathematics 4302
Specification B

Module 5 Paper 1 Tier F   43005/1F

Mark Scheme

2008 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.

The following abbreviations are used on the mark scheme:

M	Method marks awarded for a correct method.
A	Accuracy marks awarded when following on from a correct method. It is not necessary always to see the method. This can be implied.
B	Marks awarded independent of method.
M dep	A method mark which is dependent on a previous method mark being awarded.
ft	Follow through marks. Marks awarded for correct working following a mistake in an earlier step.
SC	Special Case. Marks awarded for a common misinterpretation which has some mathematical worth.
oe	Or equivalent.
eeoo	Each error or omission.

MODULE 5   FOUNDATION TIER   43005/1F

1(a)	13	B1	
1(b)	–4	B1	B1 for –4 in (a) and 13 in (b)
1(c)	17	B1 ft	
1(d)	Correct position identified 1ºC	B1	

2(a)	Kilometre(s) or km	B1	Ignore values
2(b)	Metre(s) or m	B1	Ignore values
2(c)	Litre(s) or centilitre(s) l or cl	B1	Ignore values

3	Rhombus	B1	Not diamond
	Diagram of rectangle	B1	Need not be ruled
	1	B1	
	2	B1	
	2	B1	

4(a)	40 and 55	B2	B1 for one correct (and one incorrect) B1 for two correct and one incorrect
4(b)	24 and 40	B2	B1 for one correct (and one incorrect) B1 for two correct and one incorrect
4(c)	eg 80 (120, 160, …)	B1	

5(a)	Acute angle drawn **and** acute angle marked	B1	
5(b)(i)	63 mm	B1	± 1 mm
5(b)(ii)	Point marked on line	B1	± 1 mm
5(b)(iii)	their 6.3	M1	their 63 – 40 (= 23)
	[2.2, 2.4]	A1	

6(a)	Points plotted correctly	B2	B1 for three correct points $\pm \dfrac{1}{2}$ small square
6(b)	Four points joined to make a quadrilateral *ABCD*	B1	
6(c)	Parallelogram	B1	

6(d)	A valid property	B1	Accept:
			(opposite) sides parallel
			Opposite sides equal (in length)
			Opposite angles equal
			Diagonals bisect
			No lines of symmetry
			Rotational symmetry order 2
			2 pairs of sides equal
			Do not accept: No right angles
			                    4 vertices
			                    4 sides
			Note: Any incorrect statement scores B0

7(a)	350×2	M1	
	700	A1	
7(b)	40×5 or 200	M1	
	$99 + 40 \times 5 +$ their (a)	M1 dep	
	999	A1 ft	ft their (a) + 299

8(a)	180	B1	
8(b)	180 – 60	M1	
	120	A1	

9(a)	A and 'two horizontal lines'	B1	Accept: flat lines
9(b)	Last line identified	B1	
9(c)	Yes	B1	
	Valid explanation	B1 dep	Accept: Equal distance or same distance Same height Steepness the same Diagram symmetrical Do not accept: Same length

10(a)	1:200 000 identified	B1	
10(b)(i)	10.5×2	M1	oe
	21	A1	
10(b)(ii)	$60 \div 2$	M1	oe
	30	A1	

11	90 – 50 or 40	M1	May be on diagram at Q or adjacent (right) of z (with 65 left of z)
	180 – 65 – their 40	M1 dep	
	75	A1	

12(a)(i)	45	B1	
12(a)(ii)	39	B1	
12(b)	$\frac{36}{48}$ seen or implied Three quarters of 48 is 36	B1	0.75 and 0.77…
	Correct conclusion	B1 dep	eg 37 is greater than 36 $\left(\frac{3}{4} =\right)\ \frac{36}{48}$ Three quarters of 48 is 36 $\frac{3.0833...}{4}$
12(c)	$11(3x + 4)$	B1	

13	20×3	M1	
	$30 + 30 + 60$	M1 dep	
	120	A1	

14(a)	$x - 3$	B1	
14(b)	$x + x - 3 = 91$	B2	$2x - 3 = 91$ B1 for $x + x - 3$ oe
14(c)	$2x = 94$	M1	
	47	A1	SC1 44 and 47

15(a)	$ab + ac$	B1	
15(b)	$27 \times 3 + 27 \times 7$	M1	$x(y + z)$
	27×10 or $81 + 189$	A1	
	270	A1	

16(a)	169	B1	
16(b)	Valid explanation	B1	eg 4^2 ends in a 6 $14^2 = 196$ Do not accept eg $14^2 = 116$

17(a)	$-6a + 2b - 10$	B2	B1 for two correct terms $-6a - -2b + -10$ scores B1
17(b)	$32e - 36 \ (+2e)$	M1	
	$34e - 36$	A1	