AQA

ASSESSMENT and
QUALIFICATIONS
ALLIANCE

General Certificate of Secondary Education

Mathematics 3302
Specification B

Module 5 Paper 1 Tier F   33005/F1
THREE TIER

Mark Scheme

2007 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.

Further copies of this Mark Scheme are available to download from the AQA Website: www.aqa.org.uk

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   33005/F1

1(a)	8	B1	
	cm^3	B1	UNITS mark, may be seen in either (a) or (c) Either part correct
1(b)	Cuboid	B1	
1(c)	16 (cm^3)	B1 ft	ft (a) $\times 2$ Note: Units mark may be awarded for correct units in either part (a) or part (c)

2(a)	2	B1	
2(b)	4 and 16	B2	B1 for 1 correct and 1 incorrect or 1 correct and 0 incorrect
2(c)	8	B1	
2(d)(i)	1 64	B1 B1	
2(d)(ii)	12 24 48	B2	B1 for 2 correct in the correct place
2(d)(iii)	$\times 2$	B1	oe Accept: double, twice

3(a)	360	B1	
3(b)	Acute	B1	
3(c)	Obtuse	B1	
3(d)	66	B1	

4(a)	$1000 \div 100$	M1	
	10	A1	
4(b)	3.5×100	M1	
	350	A1	
4(c)	$480 \div 1000$	M1	
	0.48(0)	A1	
4(d)(i)	One correct point plotted other than (0, 0)	B1	$\pm \frac{1}{2}$ square tolerance
	Straight line drawn through correct points	B1	$\pm \frac{1}{2}$ square tolerance
4(d)(ii)	Reading from 10 pints	M1	
	eg 5.7	A1 ft	ft tolerance ± 0.2
4(d)(iii)	Reading from 3 litres	M1	
	eg 5.25	A1 ft	ft tolerance ± 0.2

5(a)	Valid explanation	B1	eg add up the sides eg $6 + 7 + 12 + 9 + 5$ (= 39)
5(b)	$12 - 5$	M1	Allow $5 - 12$
	7	A1	Allow -7
5(c)	$39 \div 6$	M1	
	6.5	A1	

6(a)	070(º)	B1	Do not accept 70
6(b)	8	B1	[7.9, 8.1]
6(c)(i)	their 8 cm $\times$ 3	M1	
	24 (km)	A1 ft	
6(c)(ii)	their 4.5 $\times$ 3	M1	[4.4, 4.6]
	13.5	A1 ft	[13.2, 13.8]

7(a)	$180 - 145$	M1	
	35	A1	
7(b)(i)	35	B1 ft	their (a)
7(b)(ii)	Valid reason	B1	eg (Vertically) opposite Angles are equal

8(a)(i)	6	B1	
8(a)(ii)	$6y = 21$	M1	$21 \div 6$, 3 r 3
	3.5	A1	oe $\dfrac{21}{6}$ or $\dfrac{7}{2}$
8(a) (iii)	$6z + 6 = 48$	M1	$z + 1 = 48 \div 6$
	$6z = 48 - 6$ or $6z = 42$	M1 dep	$z = 48 \div 6 - 1$
	7	A1	
8(b)	$5 \times 4 - 6$	M1	
	14	A1	

9(a)	$4(x + 2)$	B1	
9(b)	$4x(x + 2)$	B2	B1 for partial factorisation $4(x^2 + 2x)$ or $2(2x^2 + 4x)$ or $x(4x + 8)$ or $2x(2x + 4)$ Note: If answer to (a) is $2(2x + 4)$ award B2 for $2x(2x + 4)$ SC1 for eg $4(x + 8)$ in (a) followed by $4x(x + 8)$ in (b)

10(a)	8	B1	
10(b)	$+14$	B1	Must have +
10(c)	34	B1	
10(d)	$\div 5$ or -12 or $\times 0.2$ or $\times \dfrac{1}{5}$	B1	
10(e)	eg $+ 2 + 2$	B1	Correct combination