GCSE 2004
June Series

ASSESSMENT and QUALIFICATIONS ALLIANCE

Mark Scheme

Mathematics B (3302)
Module 5 Paper 1 Tier F

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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 Paper 1 FOUNDATION TIER 33005/F1

1(a)	i) 32	B1	
	ii) 3.2	B1 ft	Follow through their (i) ÷ 10
(b)	32	B1 ft	Follow through their (ii) × 10

2(a)	Any two multiples of 4	B1	Allow more than two if all correct
(b)	Any two multiples of 7	B1	Allow more than two if all correct
(c)	Any multiple of 28	B1	

3(a)	10	B1	
(b)	cm^3	B1	Units mark

4(a)	At least two answers from 2×9 9×2 18×1 1×18	B1	Allow other correct multiplications eg $\frac{1}{2} \times 36$
(b)	i) 1800	B1	
	ii) 18 000	B1 ft	ft from (i) × 10
	iii) 60	B1	
(c)	$\frac{1}{6}$	B1	

5(a)	Obtuse	B1	
(b)	Acute	B1	
(c)	87	B1	

6	5 + 1 + 5 + 1 or 12	M1	
	2 + 3 + 2 + 3 or 10	M1	
	Identifies shape *A*	A1	Note: Shape *A* with no working scores 0 SC1 for *A* = 16 and *B* = 14

7(a)	$6a$	B1	Do not accept $a6$ Allow 6 apples oe
(b)	360 ÷ 6 or 360 ÷ their 6	M1	oe ft provided (a) is linear and $\neq 1a$
	60	A1 ft	

8	*B E F*	B2	B1 for 2 correct and none incorrect or 3 correct and 1 incorrect Ignore any reference to *A*

33005/F1

9	$2 \times 1000 \times 2.205$	M2	M1 for one multiplication
	4410	A1	4.410 or 2000 or 2205 implies M1

10(a)	16	B1	
(b)	9	B1	Accept –9, 9×9, 9^2

11(a)	Points plotted at (300, 2) and (450, 8)	B2	–1 eeoo Tolerance $\pm \frac{1}{2}$ small square
(b)	Ruled line joining their points	B1 ft	
(c)	Reading off at 375 or $\frac{2+8}{2}$	M1	
	5	A1 ft	Follow through is from their reading off at 375 ($\pm \frac{1}{2}$ square tolerance)

12	$360 – (80 + 55 + 120)$	M1	oe
	105	A1	

13(a)	5.3×100	M1	± 0.1
	530	A1 ft	
(b)	230	B1	$\pm 2°$
(c)	Angle of 120° at *S*	B1	$\pm 2°$
	Distance of 4.5 cm from *S*	B1	± 0.1

14	$\frac{12}{60}$ $\frac{18}{60}$ $\frac{21}{60}$ $\frac{14}{60}$ ($\frac{15}{60}$) or 0.2 0.3 0.35 0.23… (0.25)	M2	M1 for converting 2 fractions of the 4 (to compare) or M1 for converting 2 decimals of the 4 (to compare) Reciprocal method: 5 3.3… 2.8… 4.2 (must compare with 4) Accept correct diagrams
	$\frac{7}{30}$	A1	No working shown M0

33005/F1

15(a)	1016	B1	
(b)	28 (km)	B1	
(c)	*BC*	B1	
	Steeper line	B1 dep	Accept: *BC* covers 18 km but *AB* covers 10 km in same time Longest distance, shortest time

16(a)	112	B1	
	Corresponding angle	B1	Accept F angle Note: 68 or 130 and corresponding scores B0B0
(b)	180 – 130	M1	oe eg 360 – 68 – 112 – 130
	50	A1	

17(a)	$4x = 12$	M1	
	3	A1	
(b)	$y + 5 = 28 \div 2$ or $2y + 10 = 28$	M1	
	$y = 14 - 5$ or $y = \frac{28-10}{2}$	M1 dep	
	9	A1	
(c)	$7z + 3z$ or $9 - 2$	M1	
	$10z = 7$	A1	
	$\frac{7}{10}$	A1	oe