

# GCSE 2005

## *March Series*



## Mark Scheme

### Mathematics B (3302)

#### *Module 1 Tier F*

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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.

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*Dr Michael Cresswell Director General*

**The following abbreviations are used on the mark scheme:**

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

**MODULE 1 FOUNDATION TIER****33001F****Note: Probability - Accept fraction, decimal or percentage. Do not accept ratio.**

1 out of 3 or 1 in 3 penalise once on whole paper.

1(a)	Ready salted	B1	
(b)	36	B1	
(c)	30	B1	
(d)	$36 + 60 + 50 + 20 + 10$	M1	their 36
	176	A1 ft	ft 140 + their 'b'

2(a)	i) Evens	B1	
	ii) Likely	B1	
	iii) Impossible	B1	
(b)	The probabilities add up to more than 1	B1	

3(a)	Arranging in order and indicating middle	M1	
	6.5	A1	
(b)	Attempt to add the numbers	M1	At least 13; <u>or</u> sight of number in range 75 to 200
	their $84 \div 14$	M1	
	6	A1	Note: must check from correct working

4(a)	(£)15	B1	
(b)	2001 and 2002	B1	Accept 01 and 02 but not 1 and 2 <u>not</u> values in £'s

5(a)	Correct key	B1	Using any 2 digit value
	9 4 5 8 9 2 3 4 4 8 0 2 6 1	B2	Fully correct and ordered B1 for all correct values unordered or 4 rows fully correct and ordered
(b)	32	B1	

**33001F**

6(a)	Correct tallies	B1	
	Correct frequencies 8, 4, 6, 2	B1	B1 if tallies and frequencies both wrong but consistent with each other
(b)	Whole symbols correct	B1 ft	Two chocolate, one vanilla, one orange
	Half symbols correct	B1 ft	One half orange, one half lemon If quarter symbols needed must be correct order of size
(c)	Lemon, Vanilla, Orange, Chocolate	B1	

7(a)	$60 \div 12$ or $5^\circ$ per child	M1	or $(90 =) 60 + 30$ or $90 \div 60 = 1.5$ or $10^\circ = 2$ or $30^\circ = 6$
	$90 \div 5$	M1	$12 + 6$ children or $12 \times 1.5$
	18	A1	
(b)	$6 \times 12$	M1	or $360 \div 5$ or $\text{ans(a)} \times 4$ ; or $12 (+) 12 (+) 18 (+) 30$ or $3 (+) 9 (+) 12 (+) 18 (+) 30$
	72	A1	

8(a)	Any 2 rows or columns correct	M1	
	Table fully correct	A1	6 7 8 9 7 8 9 10 8 9 10 11 9 10 11 12
(b)	i) $\frac{1}{16}$	B1 ft	ft from fully completed table Allow 0 or $\frac{0}{16}$ if no 6's
	ii) Total of 6 or numerator 6	M1 ft	ft from fully completed table but <u>not</u> for zero
	$\frac{6}{16}$	A1 ft	oe
(c)	$\frac{4}{16} \times 100$ or $\frac{1}{4} \times 100$ or $100 \div 4$	M1	ft from fully completed table if at least one '9'
	25	A1	

**33001F**

9	Suitable scales for both axes	B1	Frequency scale from 0 Insurance scale linear from their starting point
	Points plotted at correct heights	B1	Must be from linear frequency scale $\pm \frac{1}{2}$ sq
	Histogram blocks correctly located or frequency polygon plots at midpoints and joined	B1	