Version 1.0

General Certificate of Secondary Education

Mathematics (Linear) B
4365

Paper 1 Foundation Tier

Mark Scheme

Specimen Paper

Mark Schemes

Principal Examiners have prepared these mark schemes for specimen papers. These mark schemes have not, therefore, been through the normal process of standardising that would take place for live papers.

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

The Assessment and Qualifications Alliance (AQA) is a company limited by guarantee registered in England and Wales 3644723 and registered charity number 1073334.
Registered address AQA, Devas Street, Manchester M15 6EX *Dr Michael Cresswell Director General.*

Glossary for Mark Schemes

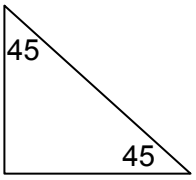
GCSE examinations are marked in such a way as to award positive achievement wherever possible. Thus, for GCSE Mathematics papers, marks are awarded under various categories.

M	Method marks are awarded for a correct method which could lead to a correct answer.
A	Accuracy marks are awarded when following on from a correct method. It is not necessary to always see the method. This can be implied.
B	Marks awarded independent of method.
Q	Marks awarded for quality of written communication.
M dep	A method mark dependent on a previous method mark being awarded.
ft	Follow through marks. Marks awarded following a mistake in an earlier step.
SC	Special case. Marks awarded within the scheme for a common misinterpretation which has some mathematical worth.
oe	Or equivalent. Accept answers that are equivalent. eg, accept 0.5 as well as $\frac{1}{2}$

Foundation Tier

Q	Answer	Mark	Comments
1	2nd statement to certain	B1	
	3rd statement to likely	B1	
	4th statement to unlikely	B1	
2(a)	B2 or 2B	B1	
2(b)	C3, D3, C4, D4 or 3C, 3D, 4C, 4D	B2	B1 For 3 correct squares listed
2(c)	West	B1	
3(a)	35	B1	
3(b)	1420 or 1455 seen	B1	
	(their 1420) – 25 (minutes)	M1	
	1355	A1	oe
3(c)	1.50 × 2 (+) 0.85 × 2	M1	oe
	3.00 + 1.70 (= 4.70)	M1	
	4.70 and yes	A1	Yes can be implied eg, 30 p change
4(a)	$9x$	B1	
4(b)	6	B1	
4(c)	13	B1	
5	48 + 52 + (90)	B1	
	NO stated or implied and justifies choice eg, 48 + 52 + 90 = 190 > 180 or 48 + 52 = 100 > 90	Q1	Strand (iii) oe eg, 180 – 52 – 90

Q	Answer	Mark	Comments
6	$15 + 7 \times 40$ or 295	M1	7×40 or 280
	(their) $295 \div 60$ or 4 h 55 m	M1	(their) $280 \div 60$ or 4 h 40 m oe
	12:45 – (their) 4 h 55 m	M1	12:45 – (their) 4 h 40 m – 15 m
	07:50	A1	oe SC3 08:05
7	$w = 3$ $x = 8$ $y = 7$	B3	B1 Each
8(a)	$24 \div 8 \times 5$	M1	
	15	A1	
8(b)	$50 \div 8 \times 5$ or $30 \div 5 \times 8$	M1	oe eg, 24×2 from (a)
	$\approx 6 \times 5 = 30$ or $= 48 \approx 50$	A1	oe eg, $6.25 \times 5 = 31.25$ (≈ 30) or 48 (≈ 50)
9	Finds the cost of two or more portions of different fruit	M1	eg, apple + banana = 30 + 25 (= 55 p)
	Finds the cost of two or more portions of different vegetables	M1	eg, carrots + broccoli = 20 (or 40) + 75 (= 95 p or £ 1.15 (oe))
	Finds the cost for one day (five portions) or more	M1	eg, 2 apples + 3 bananas = $2 \times 30 + 3 \times 25$ (= 1.35)
	35 items with at least 2 different fruit and vegetables and total cost less than or equal to £ 15	A1	
	Evidence of attempting to meet all criteria ie, using 2 different fruit and 2 different vegetables and keeping under £ 15	Q1	Strand (iii) Must see an organised response with all criteria met

Q	Answer	Mark	Comments
10(a)	Tally column correct with 5 bar gates	B1	
	Frequency column correct 5, 9, 1	B1	Correct or ft from tallies
10(b)(i)	Correct method seen or 1 correct angle seen	M1	eg $\frac{5}{18} \times 360$ or 5×20
	All three correct angles seen 100º, 180º and 20º	A1 ft	ft from frequency column in (a) $\times$ 20
10(b)(ii)	All 3 sectors drawn correctly and labelled in words 100°, 180°, 20° ±2º	B2 ft	If there are exactly 4 sectors drawn and the 4 angles sum to 360º then give B1 for 3 sectors correct or correct on ft with no labels or any one correct sector drawn and labelled or one correct ft their angles sector drawn and labelled
11(a)	Two different isosceles triangles with lengths marked	B2	B1 Each Possible combinations are (3, 4, 4) and (3, 8, 8) (4, 3, 3) and (4, 8, 8)
11(b)	Clear explanation that 3 and 4 are shorter than 8	B1	Accept a diagram labelled with lengths
11(c)	Approximate isosceles triangle drawn with angle 90° shown (or right angle sign)	B1	SC1 
	At least one 45° angle shown **or** 2 sides adjacent to 90° marked as equal with numbers or a dash	B1	B0 If a side and hypotenuse marked as equal

Q	Answer	Mark	Comments
12(a)	$2000 \div 50 \times 5$	M1	oe
	200	A1	
12(b)	$(12 \times 2000) \times (0.)10$ $(= 2400$ or $240\,000)$	M1	Annual other running cost
	$0.4 \times 24\,000$ $(= 9600)$	M1	Annual income
	$4800 > 3000$, so YES	A1 ft	Profit after deductions Their 9600 – their 2400 – their 2400
	Clear calculation of annual cost Comparison with £3000 Conclusion drawn following through from their working	Q1	Strand (ii) - Logical argument with key steps shown leading to correct conclusion from their working
13	200 – 110 (boys)	M1	or $\frac{110}{200} \times 100$ or $110 \div 2$ or 55
	$\frac{Their\ 90}{200} \times 100$ or their $90 \div 2$	M1	or 100 – their 55
	45	A1	
14(a)	Line from (9, 0) to (10.5, 7.5)	B1	oe
	Horizontal line for 30 minutes from their (10.5, 7.5)	B1 ft	
	Line to (12, 0) from their (11, 7.5)	B1 ft	
14(b)	7.5	B1 ft	oe
15(a)	$\Sigma xf\ (3 \times 0 + 4 \times 4 + 5 \times 6 + 6 \times 9 + 7 \times 8 + 8 \times 3)$	M1	
	180	A1	
	6	A1 ft	ft Their total ÷ 30 if M1 awarded
15(b)(i)	Reference to cumulative totals for French (1, 5, 13, 21, 30)	M1	eg, 'I added the frequencies'
	5	B1	
15(b)(ii)	5 Spanish level 5 and 6 17 French level 5 and 6	B1	Lots of zeros in top right hand of table The numbers above zero are on or below the leading/main diagonal

Q	Answer	Mark	Comments
16(a)	Correct reflection	B2	B1 For reflection in $x = 1$ or x-axis or y-axis
16(b)	Correct rotation	B3	B2 For 90° rotation clockwise about any point other than *O* B2 For 90° rotation **anti**clockwise about *O* B1 For 90° rotation **anti**clockwise about any point other than *O* SC2 For their *B* correctly rotated