



General Certificate of Secondary Education

Mathematics (Linear) B 4365

Paper 2 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.

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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(a)	2×57 or 2×0.57	M1	oe
	1.14	A1	Accept 114p
1(b)	$1.08 + 54$	M1	oe
	1.62	A1	Accept 162p
1(c)	(£) 3.28 seen	M1	oe
	0.78	A1	Accept 78p
2(a)(i)	Diameter	B1	
2(a)(ii)	Chord	B1	
2(a)(iii)	Radius	B1	
2(b)	Tangent drawn at A	B1	
3	(£) 13.10	B1	
	1.50 or $\frac{90}{100} \times 15$	M1	oe
	(£) 13.50	A1	
	Attempts subtraction of lunch and bus fare Attempts to work out reduced price Draws conclusion following through their working	Q1	Strand (ii) Logical steps ft their working (with errors) to a conclusion
4(a)	Correct tallies using group of five triangles (Triangles 8) (Quadrilaterals 3) Pentagons 4	B2	B1 For two categories correct
	Frequencies correct	B1ft	Follow through from their tallies
4(b)	Suitable diagram drawn with appropriate labels on both axes, correct vertical heights and scales	B3	B3 Bar chart or vertical line graph B2 For all but one of the criteria met B1 For at least one criteria met

Q	Answer	Mark	Comments
5(a)	(B and) E	B1	
	(A and) F	B1	
5(b)	All 3 pairs identified B and C D and E E and F	B2	B1 For two identified with none incorrect
5(c)	C and D shaded	B1	
6	78 or $78 \div 3 = 26$ seen	M1	
	Lines dividing face into (11, 12, 1, 2), (10, 9, 3, 4) and (8, 7, 6, 5)	A1	SC1 1 section with total of 26
6 Alt	Evidence of dividing clock face and adding numbers	M1	
	Correct division of face	A1	
7(a)(i)	40°	B1	
7(a)(ii)	$270 - 140$ or $360 - 90 - 140$	M1	
	130°	A1	
7(b)	$2 \times 80 + 2 \times 45 (= 250)$ or $80 + 45 + 80 + 45 (= 250)$	M1	or 0.8 and 0.45 seen
	(their) $250 \div 100$	M1	or $2 \times 0.8 + 2 \times 0.45$ or $0.8 + 0.45 + 0.8 + 0.45$
	2.5 metres	A1	
8(a)	Top right or bottom left square added	B1	
8(b)	Bottom left or top right square added	B1	
8(c)	Top left square shaded	B1	

Q	Answer	Mark	Comments
9(a)	Any rectangle drawn	M1	
	Rectangle 9 by 6	A1	
	Rectangle divided in ratio 2 : 1	B1	Any correct division
	Correct label on at least one part	B1 ft	
9(b)	Any correct method eg, 6×6 or 9×4 or $54 \times \frac{2}{3}$ or a successful counting method	M1	
	(their) 36×2.50	M1	
	(£)90	A1	
10(a)	2.68328...	B1	
10(b)	373.248	B1	
11(a)	$(6 + 8) = 14$	B1	
11(b)	$4a + 8b$ or $4(a + 2b)$	B2	B1 For one term correct
11(c)	$5w + w = 9 - 6$	M1	Allow one sign error
	$6w = 3$	M1	For collecting like terms ft Their first line
	$\frac{1}{2}$	A1	oe Accept $\frac{3}{6}$
12(a)(i)	(£) 15	B1	
12(a)(ii)	Company A	B1	
	Cheaper or only £ 10 or £ 5 less	B1	
12(b)(i)	$300 - 250$	M1	
	50	A1	
12(b)(ii)	(£)20	B1	
	$20 \div 0.25$	M1	oe
	80	A1	

Q	Answer	Mark	Comments
13	Identifies total getting on at B as 6	M1	oe eg, 7 at C
	Identifies pattern of passengers increasing as 6, 7, 8, 9 etc	A1	11, 18, 26, etc
	56	A1	
14	$x + 3 = 8$ or $x = 5$	M1	oe $x + 3 + 8 = x - 1 + PQ$ for M2
	$(32 - \text{their } 4 - \text{their } 4) \div 2$	M1	
	12	A1	
	Must use square to find x and then use their x in oblong to find PQ	Q1	QWC Strand (iii) – To achieve a correct solution, a clear and organised approach must be evident
15	$(x =) 55^\circ$	B1	
	$(y =) 55^\circ$	B1	
	$180 - 55 - \text{their } y$	M1	
	$(z =) 70^\circ$	A1 ft	
16(a)	(3), (5), (7), 9, 11 (5), 7, 9, 11, 13 7, 9, 11, 13, 15 9, 11, 13, 15, 17	B2	-1 eooo
16(b)	$\frac{3}{20}$	B1	oe
16(c)	$P(13) = \frac{3}{20}$ implies 15 winners in 100 plays	B1	Award partial marks for stages shown
	(Chocolate costs) £ 7.50	B1	
	(Takings) 100×20 (= £ 20)	B1	
	(Profit) £ 20 – £ 7.50 (= £ 12.50)	B1	

Q	Answer	Mark	Comments
17(a)	$\frac{195 + 210}{2}$	M1	oe eg, $\frac{195 + 15}{2}$
	= 202.5	A1	
17(b)	165 – 30	M1	oe
	135	A1	
18(a)	Minutes 200×6 p or £ 12	M1	Option 1
	150×10 p or £ 15	M1	
	£ 27 extra	A1	
	400×6 p or £ 24	M1	Option 2
	Option 2 and £ 24 and £ 27	Q1	QWC Strand (ii) - A structured argument using accurate mathematical language
18(b)(i)	(£) 25	B1	
	150 (minutes)	B1	
18(b)(ii)	500 – 150 (or 350) or 43 – 25 (or 18)	M1	oe Allow data from any two points
	(their) $18 \div$ (their) 350 ($\times 100$)	M1	oe or 0.05(1...) seen
	5.1 (pence)	A1	
19(a)	(2, 72) circled	B1	
	Indicates away from pattern	B1	oe Not close to line of best fit Outlier
19(b)	Best fit line drawn	B1	From (1, 15) – (1, 25) To (5, 65) – (5, 80)
19(c)(i)	Read off at 4 using their line of best fit	M1	eg, 52 Allow 54 to 62 with no line of best fit
	Their 52 – 40	A1	eg, 12
19(c)(ii)	Quite a small sample or mention of any other variable that could confound	B1	oe

Q	Answer	Mark	Comments
20(a)(i)	Too vague	B1	oe
20(a)(ii)	Not enough choices or choices overlap	B1	oe
20(b)	Response section that covers values from 0 to at least 5 with no missing values and no overlapping values	B1	
20(c)(i)	Too small a sample or other sensible reason	B1	eg, may not have anyone whose surname begins with X or Z
20(c)(ii)	Method 2, all patients have equal chance	B1	
21	Points plotted accurately	B1	$\pm \frac{1}{2}$ square
	Smooth curve through correct plots	B1	$\pm \frac{1}{2}$ square
	$x = 1.7$	B1	Allow 1.6 - 1.8