Version 1.0

General Certificate of Secondary Education
Practice Paper
Set 3

Mathematics (Linear) B

Paper 1 Higher Tier 4365/1H

Mark Scheme

Mark Schemes

Principal Examiners have prepared these mark schemes for practice 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. (QWC)
M Dep	A method mark dependent on a previous method mark being awarded.
B Dep	A mark that can only be awarded if a previous independent mark has been 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 $\frac{1}{2}$

Paper 1 Higher Tier

Q	Answer	Mark	Comments
1(a)	330 + 280 + 250 + 640	M1	
	1500	A1	
1(b)	180 ÷ 60	M1	
	3	A1	
2	30 ÷ 4 (= 7.5)	M1	
	3.2 (× 2)	M1	
	6.4	A1	
	Murphy's and 38.4 and 37.5 seen	A1	
✶3(a)	59	B1	
	Corresponding	Q1	strand (i)
3(b)	180 – 112	M1	
	68	A1	
4	$k = 11$, $q = 23$ and $r = 17$	B3	k and r can be in either order
4 Alt	**Alt for part marks**		
	Any prime between 10 and 25 seen	B1	11, 13, 17, 19, 23
	Attempt to add any two primes between 10 and 25 and divide by 2	B1	
5	Boy and girls shown separately	B1	
	Numbers of texts identified	B1	
6	$2 \times 8 \times \pi$	M1	
	$16\ \pi$	A1	

Q	Answer	Mark	Comments
7(a)	Even	B1	
7(b)	Odd	B1	
8	$\sum xf$ (= 260)	M1	0, 28, 120, 68, 44
	Their 260 ÷ 20	M1 Dep	
	13	A1	
9	720 ÷ 6 (= 120)	M1	
	their 120 – 90 (= 30)	M1	
	(180 – their 30) ÷ 2	M1	
	75	A1	
9 Alt	360 ÷ 6 (= 60)	B1	
	180 – 90 – their 60 (= 30)	M1	
	(180 – their 30) ÷ 2	M1	
	75	M1	
10	6.76 – 5.76 (= 1)	M1	
	$\sqrt{1}$	M1 Dep	Square root must be seen
	1	A1	
✷11	$6x – 2 = 3x + 13$	M1	
	$6x – 3x = 13 + 2$	M1	
	$x = 5$	A1	
	Expands the left hand side, rearranges to get letters on one side and numbers on the other and solves their equation	Q1	strand (iii)
12(a)	$0.25 \times 20 = 5$ or $20 \div 5 = 0.25$	B1	

Q	Answer	Mark	Comments
12(b)	$\frac{1}{5}$ seen	B1	
	No as $0.2 = \frac{1}{5}$	B1	oe
13	$5x - 2(3x - 1) = 4$	M1	
	$5x - 6x + 2 = 4$	A1	
	$x = -2$	A1	
	$y = -7$	A1	
13 Alt	$2y - 6x = -2$	M1	Rearranges first equation and attempts to balance coefficients
	$-x = 2$	A1	Eliminates the balanced variable
	$x = -2$	A1	
	$y = -7$	A1	
14	Splits either diagram into smaller equilateral triangles	M1	
	Identifies $36\,cm^2$ as 9 triangles or 1 triangle $= 4cm^2$	M1	$36 \div 9 = 4$
	24	A1	
15	$2(x + 3)$	M1	
	$\frac{2}{(x+3)}$	A1	
16	$3(x + 3) - 2(2x - 1)$	M1	
	$-x + 11$	A1	
	Their $-x + 11 = 6$	M1	
	5	A1ft	ft on one error
17(a)	$8x^{12}y^3$	B2	B1 2 correct

Q	Answer	Mark	Comments
17(b)	$2(x^2 - 16y^2)$	M1	
	$2(x - 4y)(x + 4y)$	A1	
18	D, A, E, C	B4	B1 Each
19	$(AB) = \mathbf{b} - \mathbf{a}$	M1	
	$\frac{2}{3}(\mathbf{a} - \mathbf{b})$ or $\frac{1}{3}(\mathbf{b} - \mathbf{a})$	M1	
	$\mathbf{b} + \frac{2}{3}(\mathbf{a} - \mathbf{b})$ or $\mathbf{a} + \frac{1}{3}(\mathbf{b} - \mathbf{a})$	M1	
	$\frac{2}{3}\mathbf{a} + \frac{1}{3}\mathbf{b}$	A1	
20	$(y =) x^2 + 2x - 3 - (x^2 + x - 5)$	M1	
	$y = x + 2$	A1	
	1.8 and – 2.8	A1 ft	ft Their line if M1 awarded and a line drawn
21	$(2 \times) \frac{1}{2} \times \frac{1}{3}$	M1	Lists 6 combos, SS, SH, SH, HS, HS, HH
	P (same) = $\frac{1}{3}$	M1	
	$180 - 60 \times 2$	M1	
	Yes as 60 (>50)	A1	