Mark Scheme with Examiners' Report
IGCSE Mathematics (4400)

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MATHEMATICS 4400, MARK SCHEME

PAPER 1

No	Working	Answer	Mk	Notes
1ai		8753	1	B1
aii		3587	1	B1
b		3, 7	2	B1B1
c		5	1	B1
2ai		57 000	1	B1
aii		23600	1	B1
b		5000 or 1000(s)	1	B1
3ai		Correct diag	1	B1 drawn anywhere
aii		9	1	B1 on line or in table
b		11	1	B1
c	11 + (14, 15 or 16) x 2 or attempt add 14, 15 or 16 successive 2's to 11; or similar			M1
		41	2	A1
4ai		Unlikely	1	B1
aii		Impossible	1	B1
bi		3/12	2	B2 B1 each, num & denom
bii	1 – his 3/12	9/12	1	B1f
5a		Parallelogram	1	B1
b		2.8 (± 0.1) cm	1	B1 SC1: (a) Rhombus (b) 3
c	(3 + her 2.8) x 2 oe			M1
		11.6	2	A1f ft for A1 only if *AB* not integer
d		*BAD* or *BCD* marked	1	B1
e	Attempt count squares or ½x2x2 or 3x2seen			M1
		6		A1
		cm^2	3	B1
f		2	1	B1
g		0 or none oe	1	B1
h		Shape ± 0.2 mm		B2 or correct orientation, on RHS of *D*, but wrong position: B1 or 3 correct points: B1
			2	

No	Working	Answer	Mark	Notes
6ai		(-3, 2)	1	B1
aii		(4, -2) marked ± 1mm	1	B1
bi		-5, (-3), –1, 1, 3, (5)	2	B2 -B1 each error or omission
bii		Line correct (± 2mm) from x = -3 to 2	2	B2 or 3 plots correct (ft, ± 2mm) B1
7ai	15 / 2.25 or 6.6666…			M1
		6	2	A1
aii	15 - 6 x 2.25			M1
		$1.50	2	A1
b	1h 30 mins + 4h 45 mins or $1^1/_2 + 4^3/_4$			M1
	5h 75 mins or 25/4 or $6^1/_4$			M1
		6h 15 mins	3	A1
ci	5 – (-3) or attempt to count up from –3 to 5			M1
		8	2	A1
cii	5 – 6 or attempt to count down 6 from 5			M1
		-1	2	A1
8a		April	1	B1
b	72 000/4			M1
		18 000	2	A1
ci		138 $\pm$ 2^0	1	B1
cii	138/360 x 72 000 or equiv			M1
		27 400	2	A1ft Follow her 137^0
9	360 – (25 + 150 + 45)			M1
	180 – her 140			M1dep
		40	3	A1
10		3,8; 2,12; 1,24		B1B1B1 Allow omission of reversals
			3	-B1 each extra
11a		194 $\pm$ 2^0	2	B2 ($\pm$ 5^0: B1)
b	6.2 $\pm$ 0.1 or a length x 5			M1
		31 $\pm$ 0.5 km	2	A1
c		Correct pos'n $\pm$ 4mm	2	B2 (either 135 or 90 $\pm$ 2^0: B1)
12a		17, 26	2	B1B1 on line or in table
b	100 or 10^2 or √ seen			M1
		10	2	A1

No	Working	Answer	Mark	Notes
13a	2/3 x 5 or 10/3			M1
		$3^1/_3$	2	A1
bi		12	1	B1
bii	(9/12 and 10/12) or 19/12			M1 or 18/24 and 20/24, or 38/24 etc
	or (45/12 and 34/12) or 79/12 seen			
		$6^7/_{12}$	2	A1 or $6^{14}/_{24}$
14	2775 – 2500 OR 2775/2500 x 100			M1
	275 x 100 111 - 100			M1
	2500			
		11%	3	A1
15ai	60/260			M1
		3/13	2	A1
aii	Her 3/13 x 100			M1
		23(.076 . .)	2	A1f
b	60 x 195/260 oe or 195 x 0.23			M1
		45	2	A1f 44.8 to 45.1 ft her (a)(i) or (ii)
16a		Correct line	1	B1 thro' $\geq$ 3 pts ± 2mm
b		$x = 3$ OR $y = 4$ drawn		B1
		Correct region clear	4	B3 B1 each condition. ft his (a) and/or his $x = 3$ & $y = 4$ so long as vert & horiz pair
17a		Tangent, radius	1	B1
b	$\sin 40^0 = OT / 6$			M1
	$OT = 6\sin 40^0$			M1
		3.86 cm	3	A1 or better
18ai		16	1	B1
aii	Attempt find 12th or 13th student's age			M1
		17.5	2	A1
aiii	Σfx attempted (= 415)			M1
	/ 24			M1dep
		17.3 or better	3	A1 17, no wking, M0M0A0
				17, correct wking, M1M1A1
bi,ii		18 > old mean		B1
		Increase	2	B1dep