1MA1 Practice papers Set 5: Paper 2F (Regular) mark scheme – Version 1.0					
Question		**Working**	**Answer**	**Mark**	**Notes**
1.	(a)		35 000	1	B1 cao
	(b)		430	1	B1 cao
2.	(a)		2 hours 20 minutes	2	M1 for a full method to find the difference between the two times or 2.2 hours A1 2 hours and 20 minutes or 140 minutes
	(b)		No with supporting calculations	3	M1 for adding 18 and 24 to 20 50 A1 21 32 C1 (dep M1) correct conclusion from the comparison of their figure with 21 30 **Or** M1 for subtracting 18 and 24 from 21 30 A1 20 48 C1 (dep M1) correct conclusion from the comparison of their figure with 20 50 **Or** M1 for finding the time differences A1 for 40 minutes and 42 minutes C1 (dep M1) correct conclusion from the comparison of their time durations

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Question		**Working**	**Answer**	**Mark**	**Notes**
3.			3	3	M1 for 4200 ÷ 25 (= 168) M1 for "168" ÷ 60 (= 2.8) or "160" – 60 – 60 (= 40) A1 cao OR M1 for 25 × 60 (=1500) M1 for 4200 ÷ "1500" (= 2.8) or 4200 – "1500" – "1500" (= 1200) A1 cao
4.			40	3	M1 for 24 ÷ 3 (= 8) M1 for "8"× 5 A1 cao **OR** M1 for 3 × 24 (= 72) M1 for "3 × 24" – 8 – 8 – 8 – 8 A1 cao

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Question		**Working**	**Answer**	**Mark**	**Notes**
5.	(a)		24 12 × × | × × × 6 11 | 46 × 21 × 19 ×	3	B3 cao (B2 for 4, 5 or 6 entries correct) (B1 for 2 or 3 entries correct)
	(b)		20	1	B1 cao
	(c)		84	1	B1 cao
6.	(a)(i)		2.5 marked with arrow		B1 for 2.5 marked with arrow
	(a)		2500		B1 cao
	(ii)				
	(b)	$2.5 \times 40 = 100$, $100 \div 60 = 1$h 40min 1(pm) – 1h 40min	11.20 (a.m.)		M1 for a correct method to find the total cooking time M1 for a correct method to find the start time A1 cao

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Question		**Working**	**Answer**	**Mark**	**Notes**
7.	(a)	Graph (0, 0) to (100, 2400)	conversion graph	2	M1 for straight line through (0, 0) or through one other correct point e.g. (10, 240) or (50, 1200) or through (100, 2400) A1 cao
	(b)	Line from 1800 lira to graph and down	73 – 77	2	M1for line drawn from 1800 lira to their graph A1 ft for '75' ± £2

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Question		**Working**	**Answer**	**Mark**	**Notes**
8.		$\frac{130}{100} \times 340 = 442$	£442	3	M1 for $\frac{100+30}{100}$ oe M1 for $\frac{130}{100} \times 340$ oe (= 442) A1 442
		OR $\frac{30}{100} \times 340 = 102$ 340 + 102 = 442	**or** 32.35%		**OR** M1 $\frac{30}{100} \times 340$ (= 102) oe M1(dep) 340 + 102 (= 442) A1 442
		OR $\frac{30}{100} \times 340 = 102$ 450 – 102 = 348	**or** 348		**OR** M1 $\frac{30}{100} \times 340$ (= 102) oe M1 (dep) 450 – 102 (= 348) or 450 – 340 (= 110) A1 348 **or** 102 and 110

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Question		**Working**	**Answer**	**Mark**	**Notes**
9.	(i)		6	3	B1 cao
	(ii)		5		B1 cao
	(iii)		9		B1 cao
10.	(a)		2	1	B1 cao
	(b)		4	2	M1 for showing a clear intention to add all ten numbers **and** to divide by 10 A1 cao
	(c)		55	2	M1 for evidence of at least 4 attempts to multiply number of birds by frequency e.g. 0×3 , 2×1 , 3×2 , 4×3 , 5×4 , 3×5 A1 cao
11.	(a)		23	1	B1
	(b)	$(-5-3) \div 4$	-2	2	M1 A1
	(c)		$y = 4x + 3$	2	B2 for $y = 4x + 3$ oe If not B2 then B1 for $4x + 3$ **or** $x = (y - 3) \div 4$

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Question		**Working**	**Answer**	**Mark**	**Notes**
12.	(a)		12	1	B1 cao
	(b)		16	2	M1 for 96÷2 (= 48) or 96÷3 (= 32) or 96÷6 oe A1 cao
13.		60 – 18 = 42, 42 ÷ 2 = 21 **OR** $x + x + 18 = 60$, $2x = 42$	21	2	M1 for (60 – 18) ÷ 2 A1 cao **Or** M1 for $x + x + 18 = 60$ oe A1 cao **Or** M1 for 3 trials differing by 18 eg (20, 38), (10, 28), (22, 40) A1 cao

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Question		**Working**	**Answer**	**Mark**	**Notes**
14.			4.20	4	M1 for 30 ÷ (2 + 1) (=10) M1 for "10" × 2 × 2.8 (=56) oe M1 for (98 – "56") ÷ "10" A1 cao 4.2(0) **OR** algebraic approach M1 for (eg) $c=2a$ and $c+a=30$ M1 for (eg) 2.8 $c+wa=98$ M1 for (w =) (98 – "56") ÷ "10" A1 cao 4.2(0)
15.			2.15 p.m.	3	M1 for 240 ÷ 60 (=4) M1 for adding at least 3 of the 4 periods of time eg 20 (mins) + "4 (hrs)" + 25 (mins) + 30 (mins) (= 5 h 15 min) oe or 2.15 without units A1 for 2.15 pm 14 15 (h or p.m.) oe

1MA1 Practice papers Set 5: Paper 2F (Regular) mark scheme – Version 1.0					
Question		**Working**	**Answer**	**Mark**	**Notes**
16.		8 cans of cola 12 burgers 10 buns LCM is 120 Cola 5 × 2 × £3.95 = £39.50 Burgers 10 × £4.95 = £49.50 Buns 12 × £1.95 = £23.40	£112.40	6	M1 for attempt to find LCM of 8, 12 and 10, eg by listing multiples or 120 seen M1 for (cola =)120 ÷ 8 (= 15) packs or (burgers =) 120 ÷ 12 (= 10) packs or (buns =) 120 ÷ 10 (= 12) packs M1 for (packs of cola =) $\frac{2}{3}$ × 15 (= 10) M2 for (total cost =) $\frac{2}{3}$ × 15 × 3.95 + 10 × 4.95 + 12 × 1.95 (M1 for total cost for their packs of cola, burgers and buns) C1 (dep on first M1) for £112.4(0) or ft their costs with work for cola, burgers and buns clearly identified
17.		4.5 × 1000 × 1000	4 500 000	2	M1 for complete method equivalent to 4.5 × 1000 × 1000 A1 for 4 500 000 oe
18.			195	2	M1 for 325 ÷ (8 – 3) (= 65) A1 cao

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Question		**Working**	**Answer**	**Mark**	**Notes**
19.			The Friendly Bank	4	M1 for a correct method to find interest for the first year for either bank **OR** correct method to find the value of investment after one year for either bank **OR** use of the multiplier 1.04 or 1.05 M1 for a correct full method to find the value of the investment (or the value of the total interest) at the end of 2 years in either bank A1 for 2100.8(0) and 2110.5(0) (accept 100.8(0) and 110.5(0)) C1 (dep on M1) ft for a correct comparison of *their* total amounts, identifying the bank from their calculations **OR** M1 for either 1.04×1.01 or 1.05×1.005 M1 for 1.04×1.01 and 1.05×1.005 A1 for 1.0504 and 1.05525 C1 (dep on M1) ft for a correct comparison of *their* total multiplying factors identifying the bank from their calculations

1MA1 Practice papers Set 5: Paper 2F (Regular) mark scheme – Version 1.0					
Question		**Working**	**Answer**	**Mark**	**Notes**
20.		$30x + 4y = 46$ (×2) $24x + 8y = 45.20$ (×0.5) Eg $60x + 8y = 92$ $24x + 8y = 45.20$ $36x = 46.8$ $x = \frac{46.8}{36}$ Eg $30x + 4y = 46$ $12x + 4y = 22.60$ $18x = 23.4$ $x = \frac{23.4}{18}$ **OR** Eliminates x first **Or** substitution back into any correct equation	Petrol £1.30 Oil £1.75	5	B1 for correct equations expressed in terms of two variables (oe) M1 for correct process to eliminate either variable (condone one arithmetic error) A1 for either x = £1.30 or £1.75 oe M1 (dep on 1st M1) for correct substitution of their found variable **OR** M1 (indep of 1st M1 for a correct process to eliminate the other variable (condone one arithmetic error) A1 cao for both x =£1.30 and £1.75 oe (SC B1 for x = £1.30 , B1 for y= £1.75 oe if M0 scored)

1MA1 Practice papers Set 5: Paper 2F (Regular) mark scheme – Version 1.0					
Question		**Working**	**Answer**	**Mark**	**Notes**
21.		(100% – 10%) × Normal Price = £4.86 Normal Price = £4.86 ÷ 0.9	£5.40	3	M1for '4.86 is 90%' or (100% – 10%) × Normal Price = 4.86 or 4.86 ÷ 90 M1 for 4.86 ÷ 0.9 or 4.86 × 10 ÷ 9 oe A1 £5.40 (accept 5.4) **OR** M1 10% = £0.54 or £4.86 ÷ 9 M1 (dep) £4.86 + '£0.54' A1 £5.40 (accept 5.4)
22.		180 – 150 (=30) 360 ÷ "30" OR $\frac{N-2}{N} \times 180 = 150$ $(N-2)180 = 150N$ $30N = 360$	12	3	M1 for 180 – 150 (=30) M1 for 360 ÷ "30" A1 cao **OR** M1 for $\frac{N-2}{N} \times 180 = 150$ M1 for 360 ÷ "30" A1 cao

National performance data from Results Plus

	Original source of questions						Mean score of students achieving grade:					
Qn	Spec	Paper	Session YYMM	Qn	Topic	Max score	ALL	C	D	E	F	G
1	5AM1	1F	1306	Q01	Rounding to dp or sf	2	1.76	1.91	1.83	1.71	1.50	1.56
2	1MA0	2F	1511	Q02	Time calculations	5	4.34	4.73	4.52	4.23	3.70	3.03
3	5MB3	3F	1511	Q05	Number problems	3	2.48	2.67	2.64	2.57	1.00	1.33
4	5MB2	2F	1511	Q14	Perimeter	3	2.12	2.71	2.24	2.00	1.12	0.33
5	1380	2F	1011	Q20	Two-way tables	5	4.26	4.82	4.67	4.32	3.45	2.11
6	5AM1	1F	1311	Q07	Conversions	5	3.76	4.56	3.77	3.43	2.60	2.00
7	5AM2	2F	1211	Q12	Conversion graphs	4	2.38	3.44	2.51	2.01	1.41	0.90
8	5AM1	1F	1406	Q18	Percentages	3	1.49	2.51	1.93	0.90	0.27	0.08
9	1380	2F	1111	Q14	Properties of 2D shapes	3	1.99	2.49	2.20	1.90	1.57	1.22
10	1MA0	2F	1311	Q14	Mean, median, mode	5	2.84	4.02	3.34	2.64	1.86	1.15
11	4MA0(R)	2F	1405	Q05	Derive expressions	5	3.32	3.98	3.77	2.14	2.08	0.29
12	5MM2	2F	1411	Q05	Volume	3	1.40	2.37	1.76	1.23	0.62	0.86
13	5AM2	2F	1211	Q07	Derive expressions	2	0.89	1.55	1.01	0.52	0.22	0.11
14	5AM2	2F	1411	Q19	Fractions, percentages, decimals	4	2.32	3.10	2.71	2.12	0.47	1.50
15	1MA0	2H	1406	Q06	Time calculations	3	2.12	2.01	1.43	0.83		
16	5AM1	1H	1211	Q07	Money calculations	6	4.36	3.72	2.07			
17	5MB3	3H	1303	09b	Conversions	2	0.26	0.03	0.02	0.05		
18	NEW				Ratio	2						
19	1MA0	2H	1306	Q14	Compound interest	4	2.22	1.94	0.97	0.23		
20	5AM1	1H	1206	Q15	Simultaneous equations	5	3.05	1.43	0.36	0.00		
21	1380	2H	1106	Q16	Reverse percentages	3	1.41	0.65	0.21	0.05		
22	5MM2	2H	1106	Q08	Interior and exterior angles	3	1.08	0.41	0.09	0.00		
						80						