1MA1 Practice papers Set 4: Paper 1F (Regular) mark scheme – Version 1.0					
Question		**Working**	**Answer**	**Mark**	**Notes**
1.			$2f$	1	B1 cao
2.	(a)		Six thousand	1	B1 accept 6000
	(b)		6700	1	B1 cao
	(c)		0.08	1	B1 cao
3.	(a)		34	1	B1 cao
	(b)		10 45	1	B1 10 45 accept any correct time notation, ignore a.m. or p.m.
4.	(a)		4, 8, 3, 3, 2	2	M1 for at least 2 tallies or 2 frequencies correct A1 for 5 correct frequencies
	(b)		correct graph	3	M1 for bar chart or other suitable chart with at least 2 correct frequencies drawn for their scale (ft from (a)) M1 for all bars labelled and vertical axis correctly scaled A1 for accurately representing their data, with all labels, ft from part (a)

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5.	(a)		No with working	2	M1 for 19.5 + 22.8 (= 42.3) **or** 40 − 19.5 − 22.8 (= −2.3) **or** 22 + 19 (= 41) C1 for statement with No and 42.3 **or** ±2.3 **or** 41 seen
	(b)		12 40	3	M1 for correct start, e.g. addition of two times **or** subtraction of one time from 1430 M1 for a complete method A1 for 12 40 (p.m.)
6.			20p	5	M1 for a method to find the price of the apples M1 for a method to find or use the price of 3 oranges ie 3×30 M1 for a method to combine the costs of 'their fruit' **or** for a method to total the coins M1 (dep on at least M1 from the first M2 scored) for a method to find the difference between 'their total of the coins' and the price of both 'their fruits'. (Could be 'total'-'total' or coins – 'total' or coins – individual prices. It must be physically possible.) C1 (dep on M1) for £0.20 or 20p and valid working

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7.		Odd × even = answer	Working	2	M1 any example of odd number × even number A1 odd × even with a correct result that is even identified as final answer
8.	(a)		Reflex	1	B1
	(bi)		54	2	B1 cao
	(bii)		reason		B1 for <u>angles</u> on a straight <u>line</u> add up to <u>180</u>°
	(ci)		90	2	B1 cao
	(cii)		60		B1 cao
9.	(a)	1, 2, 3, 4, 6, 9, 12, 18, 36	4 and 9 or 1 and 6	2	M1 for listing at least 2 factors of 36 A1 for 4 and 9 or 1 and 6
	(b)		3 or 6 or 15 or 30	2	M1 for 30 ÷ 2 or 30 ÷ 5 or 30 ÷ (2 × 5) or for any factors of 30 other than 2 or 5 A1 for 3 or 6 or 15 or 30

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10.		S: $35 \div 100 \times 40 = 14$ W: $40 \div 8 \times 3 = 15$	Debbie and correct calculations	4	**Compares marks out of 40** **or fractions with denominator of 40** M1 for $35 \div 100 \times 40$ oe **or** 14 seen (or 14/40 seen) M1 for $40 \div 8 \times 3$ **or** 15 seen (or 15/40 seen) A1 for 14 and 15 **or** $\frac{14}{40}$ and $\frac{15}{40}$ C1 (dep on M1) for correct conclusion for their working
11.	(a)		(7, 3)	1	B1 cao
	(b)		(3, 1) or (–1, 5) or (11, 5)	1	B1 for (3, 1) or (–1, 5) or (11, 5)
	(c)		(3, 9)	2	M1 for correct point *E* plotted or $3 + 2(6 – 3)$ or $1+ 2(2 – 1)$ A1 for (3, 9) cao
12.			4	3	M1 for any fraction equivalent to $\frac{3}{5}$, e.g. $\frac{9}{15}$ M1 for calculation to work out number of additional counters e.g. '15' − 6 – 5 A1 cao

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13.	(a)		27	1	B1 cao
	(b)		42	1	B1 cao
	(c)		$5n + 2$	2	B2 for $5n + 2$ (oe, including un-simplified) (B1 for $5n + k$, $k \neq 2$ or k absent, or $n = 5n + 2$
	(d)	$60 - 2 = 58$ $58 \div 5 = 11.6$ (or 11 r 3)	11	2	M1 for $(60 - 2) \div 5$ ft evidence of using formula from part (c) or repeated addition of 5 (at least 3) or 57 seen A1 for 11 (cao)
14.		$(-2, 6)$ $(-1, 5)$ $(0, 4)$ $(1, 3)$ $(2, 2)$ $(3, 1)$ $(4, 0)$, $(5, -1)$	Line drawn	3	**(Table of values)** M1 for at least 2 correct attempts to find points by substituting values of x M1 ft for plotting at least 2 of their points (any points plotted from their table must be correct) A1 for correct line between $x = -2$ and $x = 5$

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15.		4000 + 1000 + 600 + 150 + 180 + 45 = 5975	Kirsty's Plants with correct calculations	5	M1 for complete method with relative place value correct. Condone 1 multiplication error, addition not necessary. M1 (dep) for addition of all the appropriate elements of the calculation or digits 5975 M1 for a complete method to find 120% of £52.50 A1 for 59.75 and 63(.00) C1 (dep on M2) for correct conclusion for their figures.
16.		(7 × 2 + 2 × 5) × 200 = 4800 4800 × 8	38 400 g	5	M1 for 7 × 2 or 2 × 5 or 7 × 7 or 5 × 5 or 2 × 2 M1 for "7 × 2" + "2 × 5" oe or "7 × 7" – " 5 ×5" M1 (dep on 1st M) for '24' × 200 or '0.0024' × 2 M1 for '4800' × 8 or '0.0048' × 8 000 000 or '0.0048' × 8000 A1 for 38 400g or 38.4kg
17.			7	4	M1 for 1 – 0.4 – 0.3 – 0.16 or 100 – 40 – 30 – 16 A1 for 0.14 oe M1 for "0.14" × 50 oe A1 for 7 or ft "0.14" × 50

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18.		$\frac{7\times200}{0.05} = \frac{1400}{0.05}$	28000	3	B1 for any two of 7, 200 or 0.05 M1 for correct processing of at least two of 7, 200 or 190 and 0.05 or 0.1 A1 in the range 26600 – 28000
19.			£500	3	M1 for 70% = 350 or $\frac{350}{70}$ M1 for $\frac{350}{70} \times 100$ oe A1 cao
20.			36	4	M1 for 360 ÷ 5 (= 72) or (2 × 5 – 4) × 90 (= 540) or (5 − 2) × 180 (= 540) M1 (dep) for 180 – "72" (= 108) or 540 ÷ 5 (= 108) (could be marked on the diagram) M1 for complete method to find angle *HAB* (360 – 2 × "108") ÷ 2 (oe) A1 cao

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21.			62	4	M1 for B to C time = 210 ÷ 70 (= 3 h) M1 for A to B dist = (5 − "3") × 50 (= 100) M1 (dep on M1) for average speed = total distance ÷ total time or 210 + (2 × 50) ÷ 5 A1 cao

National performance data from Results Plus

	Original source of questions						Mean score of students achieving grade:					
Qn	Spec	Paper	Session YYMM	Question	Topic	Max score	ALL	C	D	E	F	G
1	NEW				Collecting terms	1	No data available					
2	5MM1	1F	1406	Q01	Rounding to dp or sf	3	1.69	2.22	1.96	1.71	1.50	0.86
3	1MA0	1F	1306	Q06	Time calculations	2	1.54	1.85	1.75	1.64	1.45	1.15
4	1MA0	1F	1411	Q02	Bar charts	5	4.22	4.53	4.37	4.15	3.93	3.72
5	1MA0	1F	1411	Q11	Time calculations	5	4.31	4.79	4.60	4.34	3.89	2.99
6	1MA0	1F	1303	Q05	Money calculations	5	3.84	4.65	4.31	3.81	3.05	2.06
7	1380	1F	1006	Q14	Algebraic proof	2	1.57	1.89	1.80	1.62	1.18	0.59
8	5MM1	1F	1406	Q04	Angles	5	3.23	4.44	3.98	3.28	2.59	1.58
9	5MM1	1F	1411	Q21	HCF and LCM	4	2.65	3.66	3.30	2.45	1.78	1.60
10	1MA0	1F	1206	Q17	Fractions, percentages and decimals	4	1.41	2.98	1.88	0.87	0.26	0.09
11	5MM1	1F	1211	Q21	Coordinates in 2D	4	2.62	3.24	2.74	2.47	1.52	2.00
12	5MM1	1F	1406	Q18	Probability	3	0.82	1.61	1.08	0.65	0.39	0.23
13	5MM1	1H	1211	Q04	Pattern sequences	6	4.89	4.45	3.73	4.00		
14	1380	1H	1011	Q08	Graphs of linear equations	3	1.65	1.26	0.43	0.15		
15	1MA0	1F	1506	Q24	Percentages - VAT	5	1.98	3.84	2.79	1.83	1.04	0.56
16	1380	1H	1106	Q10	Compound measures	5	2.20	1.22	0.51	0.29		
17	5MM1	1H	1411	Q07	Probability	4	2.85	2.59	1.92	0.80		
18	1380	1H	906	Q14	Estimation	3	1.61	1.25	0.77	0.33		
19	1MA0	1H	1306	Q16	Percentages	3	1.02	0.60	0.20	0.10		
20	2MB01	2H	1306	Q10	Regular pentagons	4	1.30	0.90	0.36	0.20		
21	2MB01	2H	1406	Q13	Average speed	4	1.96	1.57	0.65	0.27		
						80						