1MA1 Practice papers Set 5: Paper 1F (Regular) mark scheme – Version 1.0					
Question		**Working**	**Answer**	**Mark**	**Notes**
1.	(i)		11	2	B1 cao
	(ii)				B1 for an appropriate reason, e.g. subtract 3 or goes down by 3
2.	(a)(i)		(2, 4)	2	B1 cao
	(ii)		(–3, –1)		B1 cao
	(b)		× at (2, –1)	1	B1 for × at (2, –1)
3.	(a)(i)		56	2	B1 for 56
	(ii)		reason		B1 for angles on a straight line add up to 180 ^{o} oe
	(b)		square or rectangle	1	B1 for square or rectangle
	(c)		kite drawn	1	B1 for kite drawn
4.	(a)		–21	1	B1 cao
	(b)		27	1	B1 cao
5.	(a)		5	1	B1 cao
	(b)		1:3	1	B1 cao

1MA1 Practice papers Set 5: Paper 1F (Regular) mark scheme – Version 1.0					
Question		**Working**	**Answer**	**Mark**	**Notes**
6.			1.83 m or 183 cm	2	M1 for 178 + 5 **or** 1.78 + 0.05 **or** 183 **or** 1.83 A1 for 1.83 m or 183 cm (units must be correct)
7.	(a)		9	1	B1 cao
	(b)		33	2	M1 for 5 × 5 **or** 25 seen in the working **or** 2 × 2 × 2 **or** 8 seen in the working A1 cao
8.	(a)		cross at 0	1	B1 cao
	(b)		cross at 1	1	B1 cao
	(c)		cross at 1/6	1	B1 for cross in guidelines (overlay)

1MA1 Practice papers Set 5: Paper 1F (Regular) mark scheme – Version 1.0					
Question		**Working**	**Answer**	**Mark**	**Notes**
9.	(a)		50	3	M1 for $\frac{6}{8}$ × 80 oe (= 60) **or** $\frac{1}{8}$ × 80 oe (= 10) (may be seen on gauges, e.g. 10 by $\frac{1}{8}$ position **or** 60 by $\frac{6}{8}$ position on either gauge) M1 (dep) for a complete correct method e.g."60" – "10" **or** 5 × "10" A1 for 50 (accept answers in the range 49 - 51) **or** M1 for $\frac{6}{8} - \frac{1}{8}$ $(=\frac{5}{8})$ M1 (dep) for "$\frac{5}{8}$" × 80 A1 for 50 (accept answers in the range 49 – 51)
	(b)		12	2	M1 for 180 ÷ 15 oe A1 cao

1MA1 Practice papers Set 5: Paper 1F (Regular) mark scheme – Version 1.0					
Question		**Working**	**Answer**	**Mark**	**Notes**
10.	(a)		6	1	B1 cao
	(b)		44	1	B1 cao
	(c)		31	2	M1 for 60 – 29 **or** 29 – 60 **or** any correct method that is attempting to find the difference between 29 and 60 (allow 1 arithmetic error) A1 cao
11.	(a)		3	1	B1 cao
	(b)		5	1	B1 cao
	(c)		18	2	M1 for "30" – "12" seen with at least one correct A1 cao (SC : B1 for 25 **and** 12 seen with an answer of 13)

1MA1 Practice papers Set 5: Paper 1F (Regular) mark scheme – Version 1.0					
Question		**Working**	**Answer**	**Mark**	**Notes**
12.		540 − 240 = 300 $\frac{15}{100} \times 300$ (or 10% = 30 5% = 15 30 + 15 = 45)	45	3	M1 for 540 – 240 or 300 seen M1 (dep) for $\frac{15}{100} \times$ '300' or correct method for 10% + 5% of '300' A1 cao
13.	(a)		8	1	B1 cao
	(b)		6.5 cm	4	M1 for 31 − 9 – 9 (=13) M1 for "13" † 2 A1 for 6.5 oe C1 for units (cm) or M1 for $x + 9 + x + 9 = 31$ oe (do not accept cm in equation) M1 for 2 9 9 31 A1 for 6.5 oe C1 for units (cm)

1MA1 Practice papers Set 5: Paper 1F (Regular) mark scheme – Version 1.0					
Question		**Working**	**Answer**	**Mark**	**Notes**
14.	(a)		$\frac{2}{21}$	1	B1 for $\frac{2}{21}$
	(b)		$\frac{4}{15}$	2	M1 for attempting to use a suitable common denominator with at least one of the two fractions correct A1 for $\frac{4}{15}$ oe
15.	(a)		30	2	M1 for 25 ÷ 10 **or** 2.5 seen **or** 10 ÷ 25 **or** 0.4 seen **or** 12 + 12 + 6 oe **or** a complete method e.g. 25 × 12 ÷ 10 oe A1 cao
	(b)	1000 ÷ 200 × 12	60	2	M1 for 500 ÷ 50 **or** 1000 ÷ 200 **or** 500 ÷ 10 **or** correct scale factor clearly linked with one ingredient e.g. 10 with sugar or 5 with butter or flour or 50 with milk **or** an answer of 120 or 600 A1 cao

1MA1 Practice papers Set 5: Paper 1F (Regular) mark scheme – Version 1.0					
Question		**Working**	**Answer**	**Mark**	**Notes**
16.			"**two** angles are **equal** so the triangle is **isosceles**"	5	M1 for $6x - 10 + 4x + 8 + 5x + 2$ **or** $15x$ M1 for $6x - 10 + 4x + 8 + 5x + 2 = 180$ **or** $15x = 180$ **or** $(x =)\ 180 \div 15$ A1 $x = 12$ M1 (ft from '12' if M2 scored) for $5 \times$ '12' $+ 2$ **or** $6 \times$ '12' $- 10$ **or** $62(^o)$ **or** $4 \times$ '12' $+ 8$ **or** $56(^o)$ C1 both base angles as 62 **and two** angles are **equal** so the triangle is **isosceles** **OR** M1 $5x + 2 = 6x - 10$ **or** $2 + 10 = 6x - 5x$ A1 $x = 12$ M1 $5 \times 12 + 2$ **or** $6 \times 12 - 10$ **or** $62(^o)$ **or** $4 \times 12 + 8$ **or** $56(^o)$ M1 checking their angles add to 180^o, "62"+"62"+"56"=180 C1 both base angles as 62 **and two** angles are **equal** so the triangle is **isosceles**

1MA1 Practice papers Set 5: Paper 1F (Regular) mark scheme – Version 1.0					
Question		**Working**	**Answer**	**Mark**	**Notes**
17.		1 – (0.5 + 0.2) 0.3 ÷ 2	0.15	3	M1 for 1 – (0.5 + 0.2) or 0.3 oe seen M1 for (1 – (0.5 + 0.2)) ÷ 2 A1 for 0.15 oe

1MA1 Practice papers Set 5: Paper 1F (Regular) mark scheme – Version 1.0					
Question		**Working**	**Answer**	**Mark**	**Notes**
18.		1.18 ÷ 4 = 0.295 (118 ÷ 4 = 29.5) 1.74 ÷ 6 = 0.29 (174 ÷ 6 = 29) 1.18 ÷ 2 = 0.59 1.74 ÷ 3 = 0.58 1.74 × 4 = 6.96 1.18 × 6 = 7.08 1.74 × 2 = 3.48 1.18 × 3 = 3.54 1.18÷2×3=1.77 1.74÷3×2=1.16 4÷1.18=3.3(…) 6÷1.74=3.4(…)	6 pints	3	M1 for division of price by quantity for both bottles or division of quantity by price for both bottles or complete method to find price of same quantity of milk A1 for two correct values that could be used for a comparison C1 ft (dep on M1) for comparison of their values with a correct conclusion.

1MA1 Practice papers Set 5: Paper 1F (Regular) mark scheme – Version 1.0					
Question		**Working**	**Answer**	**Mark**	**Notes**
19.			240	4	M1 for 16 × 2 (= 32 girls) M1 for 16 + '16 × 2' (= 48) M1 (dep on the previous M1) for (16 + '32') × 5 **or** (16 + '32') × (4 + 1) A1 cao **OR** M1 for 1 : 2 = 3 parts M1 for 5 schools × 3 parts (= 15 parts) M1 (dep on the previous M1) for '15' parts × 16 A1 cao

1MA1 Practice papers Set 5: Paper 1F (Regular) mark scheme – Version 1.0					
Question		**Working**	**Answer**	**Mark**	**Notes**
20.	(a)	$12 = 2 \times 2 \times 3$ $20 = 2 \times 2 \times 5$ OR 12: 1, 2, 3, 4, 6, 12 20: 1, 2, 4, 5, 10, 20	4	2	M1 for dealing with both 12 **and** 20 by, Writing each number as a product of prime factors (condone one error only); or by, Listing the factors of each number (condone one error only), or by, Drawing a Venn Diagram (or two factor trees) showing all prime factors of each number (condone one error only) A1 for HCF = 4 (accept 2×2 or 2^2)
	(b)	$32 = 2 \times 2 \times 2 \times 2 \times 2$ $48 = 2 \times 2 \times 2 \times 2 \times 3$ OR 32. 64, 96, 128, … 48, 96, 144, ….	96	2	M1 for dealing with both 32 **and** 48 by, Writing each number as a product of prime factors (condone one error only); or by, Listing the multiples of each number , up to at least 96 in each list (condone one error only), or by, Drawing a Venn Diagram (or two factor trees) showing all prime factors of each number (condone one error only) A1 for LCM = 96 (accept $2^5 \times 3$ or $2 \times 2 \times 2 \times 2 \times 2 \times 3$) [SC: B1 for any multiple of both 32 and 48 (e.g. 192) if M0 scored]

1MA1 Practice papers Set 5: Paper 1F (Regular) mark scheme – Version 1.0					
Question		**Working**	**Answer**	**Mark**	**Notes**
21.			32.5	3	M1 for 45 ÷ 30 (= 1.5) or 1hr 30 min seen or for 20 ÷ 40 (=0.5 or 30min) M1 (dep) for (45 + 20) ÷ ("1.5" + "0.5") A1 cao
22.	(a)		$(x + 7)(x - 7)$	1	B1 cao
	(b)	$2y^2 - 6y + 7y - 21$	$2y^2 + y - 21$	2	M1 for 3 out of no more than 4 terms correct with correct signs or the 4 terms $2y^2$, $6y$, $7y$ and 21 seen, ignoring signs A1 cao
23.	(a)	$(6 \times 10^8) \times (4 \times 10^7) = 24 \times 10^{8+7}$ 24×10^{15}	2.4×10^{16}	2	M1 $24 \times 10^{8+7oe}$ or 24 000 000 000 000 000 or 2.4×10^n A1 cao
	(b)	$(6 \times 10^8) + (4 \times 10^7)$ $= 6 \times 10^8 + 0.4 \times 10^8$	6.4×10^8	2	M1 $6\times10^8 + 0.4\times10^8$ or $60\times10^7 + 4\times10^7$ or 600 000 000 + 40 000 000 or 640 000 000 oe or 6.4×10^n A1 cao

1MA1 Practice papers Set 5: Paper 1F (Regular) mark scheme – Version 1.0					
Question		**Working**	**Answer**	**Mark**	**Notes**
24.		$150 \div 6$ or $\frac{1}{6} \times 150$	25	2	M1 $150 \div 6$ or $\frac{1}{6} \times 150$ A1 cao NB $\frac{25}{150}$ scores M1 A0

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	5MM1	1F	1406	Q03	Number sequences	2	1.82	1.90	1.89	1.87	1.82	1.63
2	5MM1	1F	1411	Q04	Coordiinates in 2D	3	2.79	2.88	2.87	2.82	2.75	2.66
3	1MA0	1F	1511	Q04	Angles	4	3.23	3.59	3.39	3.09	2.53	2.03
4	5MB2	2F	1406	Q07bc	Arithmetic	2	1.58	1.91	1.79	1.64	1.38	1.04
5	5MB2	2F	1406	Q07ef	Number, ratio	2	1.31	1.89	1.65	1.33	0.92	0.51
6	1MA0	1F	1306	Q07	Decimals	2	1.11	1.62	1.33	1.08	0.90	0.75
7	1MA0	1F	1206	Q11	Index laws	3	1.26	2.08	1.61	1.12	0.63	0.30
8	1380	1F	1106	Q13	Probability scales	3	1.33	1.94	1.54	1.22	0.86	0.57
9	1MA0	1F	1306	Q12	Reading scales	5	2.83	4.35	3.74	3.02	2.13	1.17
10	1MA0	1F	1206	Q20	Stem-and-leaf diagrams	4	2.13	3.35	2.81	2.01	1.05	0.42
11	1MA0	1F	1306	Q22	Distance-time / travel graphs	4	3.03	3.74	3.56	3.32	2.86	2.01
12	1380	1F	1011	Q20	Percentages	3	1.73	2.57	2.11	1.27	0.60	0.39
13	5MM1	1F	1311	Q23	Derive expressions	5	2.51	4.05	3.70	2.00	1.38	0.48
14	1MA0	1H	1406	Q01	Fractions	3	1.84	1.46	0.84	0.56		
15	1MA0	1F	1206	Q23	Ratio	4	1.67	2.79	2.05	1.48	0.86	0.40
16	5MM1	1F	1306	Q28	Solve linear equations	5	0.61	2.33	0.68	0.16	0.03	0.00
17	5MM1	1H	1211	Q02	Probability	3	2.60	2.43	1.73	0.00		
18	1MA0	1H	1406	Q10	Ratio	3	2.05	1.89	1.19	0.50		
19	1MA0	1F	1303	Q23	Ratio	4	1.60	2.94	1.81	0.87	0.34	0.20
20	5MM1	1H	1106	Q07	HCF and LCM	4	2.90	2.25	1.47	1.00		
21	5MB2	2H	1306	Q11	Speed	3	0.98	0.72	0.35	0.16		
22	5MB2	2H	1511	Q08de	Expanding brackets	3	1.28	1.35	1.03	0.27		
23	1380	1H	1111	Q13	Standard form	4	1.25	0.90	0.34	0.19		
24	5MM1	1H	1306	Q06	Relative frequency	2	1.34	1.07	0.78	0.35	0.11	0.67
						80	**44.78**	**56.00**	**44.26**	**31.33**		