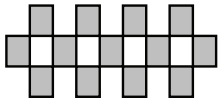
1MA0_2F					
Question		**Working**	**Answer**	**Mark**	**Notes**
1	(a)		4216	1	B1 cao
	(b)		eight thousand	1	B1 for eight thousand or 8000
	(c)		3570	1	B1 cao
2	(i)		Cuboid	2	B1 for cuboid or (rectangular) prism
	(ii)		Pyramid		B1 for pyramid, rectangular base pyramid, square base pyramid
3	(a)		24	1	B1 cao
	(b)		10	1	B1 cao
	(c)		2 circles 3 ½ circles	2	B1 for 2 circles in Thursday B1 for 3 ½ circles oe in Friday
4		10 ÷ 0.79 =12.65… 12×79 = 948 1000 – 948	52p	3	M1 for 1000 ÷ 79 **or** 10 ÷ 0.79 (=12.65…) **or** 12 × 79 **or** 12 × 0.79 A1 for 9.48 or 948 A1 for 52p or £0.52 or £0.52p (SC if M0 then B2 for 0.52, 0.52p or 52 as answer) (SC if M0 then B1 for 12 as answer)
5	(a)		90	1	B1 cao
	(b)		correct angle marked	1	B1 for O in an obtuse angle
	(c)		2 perpendicular lines marked	1	B1 for two perpendicular lines marked

1MA0_2F					
Question		**Working**	**Answer**	**Mark**	**Notes**
6	(a)		$3c$	1	B1 $3c$ oe
	(b)		$6ef$	1	B1 $6ef$ oe
	(c)		$7p + 5t$	2	B2 for $7p + 5t$ (B1 for either $7p$ or $5t$)
7	(a)		2 lines of symmetry drawn	2	B2 for fully correct answer accept freehand lines (B1 for a correct line of symmetry drawn – ignore extra lines)
	(b)		6	1	B1 6, six
8	(a)		24	1	B1 cao
	(b)		22	1	B1 for 22
9	(a)		Kanon	1	B1 cao
	(b)		Office, Quikprint	1	B1 cao
	(c)		Smart	1	B1 cao
10	(i)	360 – 140 – 60 = 160	160 and reason	2	B1 for 160
	(ii)				C1 (indep) for Angles at a point add up to 360 (o) or angles in a full turn add up to 360 (o)

1MA0_2F					
Question		**Working**	**Answer**	**Mark**	**Notes**
11	(a)		10 30	1	B1 10 30 **or** 22 30 **or** half past ten or 10.30 etc
	(b)		16 10	1	B1 16 10 Accept 16:10 and 16.10
	(c)		6 50 am	2	M1 for attempt to add 10 mins and 15 mins and 1 hour (= 1 hr 25 min) A1 for 6 50 or 6 50 am oe **OR** M1 for attempt to subtract 10 mins and 15 mins and 1 hour from 8 15 A1 for 6 50 or 6 50 am oe
12	(a)		4.8	1	B1 for answer in range 4.6 – 5
	(b)		37.5	2	M1 for a valid method eg reading from graph for 6 km then ×10 A1 for answer in range 35 – 40 **OR** M1 for use of conversion factor $60 \times {}^{5}/_{8}$ oe A1 for answer in range 35 – 40

1MA0_2F					
Question		**Working**	**Answer**	**Mark**	**Notes**
13	(a)		4	1	B1 cao
	(b)	34 ÷ 10	3.4	2	M1 for attempt to sum all values and divide by 10 **or** 34 ÷ 10 A1 3.4, $3\frac{4}{10}, 3\frac{2}{5}$
	(c)		5	2	M1 for 6 – 1 **or** 1– 6, **or** –5 A1 cao
14	(a)	3.5 × 12 – 5	37	2	M1 for 3.5 × 12 – 5 or 42 - 5 A1 cao
	(b)	3.5 × –9 – –6	–25.5	2	M1 for 3.5 × –9 – –6 **or** 3.5×–9 + 6 **or** sight of –31.5 A1 for –25.5 **or** $-\frac{51}{2}$ **or** $-25\frac{1}{2}$

1MA0_2F					
Question		**Working**	**Answer**	**Mark**	**Notes**
15	(a)			1	B1 for correct pattern
	(b)		31	2	M1 for correct diagram of pattern number 10 with or without shading A1 cao **OR** M1 for any 4 consecutive terms in the sequence 4, 7, 10, ... A1 cao **OR** M1 for use of $3n + 1$ with $n = 10$ A1 cao
	(c)		No with appropriate reason	2	M1 for attempt to divide 45 by 3 A1 for 'No' and comment that this is the number needed for pattern number 15 **OR** M1 for starts at 4 and builds up correctly to 46 or 55 A1 for 'No' and comments that 55 are needed for pattern 18 or 46 are needed for pattern 15 oe **OR** M1 for use of $3n + 1$ with $n = 18$ A1 for 'No' and comments that 55 are needed for pattern 18 oe **OR** M1 for $3n + 1 = 46$ A1 for 'No' and comments 46 are needed for pattern 15 oe

1MA0_2F					
Question		**Working**	**Answer**	**Mark**	**Notes**
16			eg. 10, 12, 5, 2	3	M1 for at least 2 factors of 60 clearly identified M1 for 20 < sum of '4 distinct natural numbers' < 35 A1 cao
17	(a)	84 ÷ 7 (=12) 120 ÷ 12	10	2	M1 for 84÷7 (=12) or 7 ÷ 84 (=0.083..) A1 cao
	(b)		Don't know + reason	1	B1 'Don't know' or 'No' with reason eg. Need to know how many medals Russian Federation won **or** pie chart shows proportion not number of medals won
18	(i)		$\frac{7}{18}$	3	B1 for $\frac{7}{18}$ oe
	(ii)		$\frac{12}{18}$		B1 for $\frac{12}{18}$ **or** $\frac{2}{3}$ oe
	(iii)		0		B1 for 0 or $\frac{0}{18}$ or zero oe
19	(a)		19	1	B1 cao
	(b)		8	1	B1 cao
	(c)		$2\frac{1}{4}$	2	M1 for $4m = 15 - 6$ **or** clear attempt to subtract 6 from both sides of the equation A1 for $2\frac{1}{4}$ **or** 2.25 **or** $\frac{9}{4}$

1MA0_2F					
Question		**Working**	**Answer**	**Mark**	**Notes**
20		$250 - 0.42\times250 - 250\div5\times2$ $= 250 - 105 - 100$ **OR** $250\times\left(1-\left(\frac{42}{100}+\frac{2}{5}\right)\right) =$ $250\times\frac{9}{50}$ **OR** $250\times\left(\frac{100-42-40}{100}\right) =$ $250\times\frac{18}{100}$ **OR** $250-250\times\left(\frac{42}{100}+\frac{2}{5}\right) =$ $250-250\times\frac{41}{50} = 250-205$ **OR** $250-250\times\left(\frac{42}{100}+\frac{40}{100}\right) =$ $250-250\times\frac{82}{100} = 250-205$	45	4	M1 for $\frac{42}{100}\times 250$ oe (=105) M1 for $\frac{2}{5}\times 250$ oe (=100) M1 for 250 – '105' – '100' A1 cao **OR** M1 for $\frac{42}{100}+\frac{2}{5}\left(=\frac{82}{100}\right)$ or $\left(=\frac{41}{50}\right)$ M1 for $1-'\frac{82}{100}'$ or $1-'\frac{41}{50}'$ M1 for $'\frac{9}{50}'\times250$ A1 cao **OR** M1 for $\frac{2}{5}\times100$ or $\frac{2}{5}=\frac{2\times20}{5\times20}$ or 2×20 M1 for 100 - 42 - '40' (= 18) M1 for '0.18' × 250 A1 cao (continued overleaf)

1MA0_2F					
Question		**Working**	**Answer**	**Mark**	**Notes**
					OR M1 for $\frac{42}{100}+\frac{2}{5}\left(=\frac{82}{100}\right)$ or $\left(=\frac{41}{50}\right)$ M1 for $'\frac{41}{50}'\times 250$ M1 for 250 - '205' A1 cao **OR** M1 for $\frac{2}{5}\times 100$ or $\frac{2}{5}=\frac{2\times 20}{5\times 20}$ or 2 × 20 M1 for '(42 + '40)'/100 × 250 M1 for 250 - '205' A1 cao

1MA0_2F					
Question		**Working**	**Answer**	**Mark**	**Notes**
21		<table><tr><td>x</td><td>-1</td><td>0</td><td>1</td><td>2</td><td>3</td></tr><tr><td>y</td><td>-5</td><td>-2</td><td>1</td><td>4</td><td>7</td></tr></table>	Straight line from (–1, –5) to (3, 7)	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 correctly plotted) A1 for correct line between –1 and 3 **(No table of values)** M2 for at least 2 correct points (and no incorrect points) plotted **OR** line segment of $y = 3x–2$ drawn (ignore any additional incorrect segments) (M1 for at least 3 correct points plotted with no more than 2 incorrect points) A1 for correct line between –1 and 3 **(Use of y=mx+c)** M2 for line segment of $y = 3x–2$ drawn (ignore any additional incorrect segments) (M1 for line drawn with gradient of 3 OR line drawn with a y intercept of –2 and a positive gradient) A1 for correct line between –1 and 3

1MA0_2F

Question		Working	Answer	Mark	Notes
22		45 ÷ (5 – 2) (=15) '15'×2 **OR** $45 \times \frac{2}{3}$ **OR**	30	3	M1 for 45 ÷ (5 – 2) M1 for '15'×2 A1 cao for 30 **OR** M2 for $45 \times \frac{2}{3}$ oe (M1 for $45 \times \frac{1}{3}$) A1 cao for 30 **OR** M1 for (2, 5); 4, 10; 6, 15; 8, 20 M1 for a completly correct list up to 30, 75 A1 cao (SC If M0 then B1 for 18 given as the answer)

P	J	T	D
2	5	7	3
4	10	14	6
6	15	21	9
8	20	28	12
10	25	35	15
12	30	42	18
14	35	49	21
16	40	56	24
18	45	63	27
20	50	70	30
22	55	77	33
24	60	84	36
26	65	91	39
28	70	98	42
30	75	105	45

1MA0_2F					
Question		**Working**	**Answer**	**Mark**	**Notes**
23			Farm shop	4	M1 for 12.5 ÷ 2.5 (=5) M1 for '5'×1.83 or '5' × 183 A1 for (£)9.15 or 915(p) C1 for decision ft working shown dep on at least M1 **OR** M1 for 12.5 ÷ 2.5 (=5) M1 for 9 ÷ 5 or 900 ÷ '5' A1 for (£)1.8(0) or 180(p) C1 for decision ft working shown dep on at least M1 **OR** M1 for 9 ÷ 12.5 (=0.72) **or** 1.83 ÷ 2.5 (=0.732) M1 for 9 ÷ 12.5 (=0.72) **and** 1.83 ÷ 2.5 (=0.732) A1 for 72(p) and 73.(2)(p) or (£)0.72 and (£)0.73(2) C1 for decision ft working shown dep on at least M1 **OR** M1 for 12.5 ÷ 9 (= 1.388...) oe M1 for 2.5 ÷ 1.83 (= 1.366.)oe A1 for 1.38.... **and** 1.36... truncated or rounded to at least 3SF C1 for decision ft working shown dep on at least M1

1MA0_2F					
Question		**Working**	**Answer**	**Mark**	**Notes**
24	(a)		Triangle with vertices (2,1) (2, 4) (4,4)	2	B2 for triangle with vertices (2,1) (2,4) (4,4) (B1 for triangle reflected in any line parallel to *x*–axis **or** for correct reflection in *y* axis (triangle at (–2,–1) (–2,–4) (–4,–4)) (B1 for a configuration which is the original triangle reflected successively in the x and y axes to give 3 triangles)
	(b)		Enlarged shape	2	M1 for any 3 sides enlarged correctly A1 for correctly enlarged shape (SC : B1 for correct enlargement with a scale factor of 2 or 4 or for a geometrically correct shape in a wrong orientation)

1MA0_2F					
Question		**Working**	**Answer**	**Mark**	**Notes**
25	(a)		51	3	M1 200 × 25.82 (= 5164) A1 for 5164 or 5200 or 5100 or 51.64 or 51.6(0) or 5160 or 52 A1 for 51 **OR** M1 for 100 ÷ 25.82 (3.87…) and 200 ÷ '3.87…' (=51.64..) A1 for 5164 or 5200 or 5100 or 51.64 or 51.6(0) or 5160 or 52 A1 for 51 cao
	(b)		15.49	3	M1 for 400 ÷ 25.82 A1 for 15.4918… A1 for £15.49 or £15.50 **OR** M1 for 4 × '3.87…' from (a) A1 15.4918… A1 for £15.49 or £15.50

1MA0_2F					
Question		**Working**	**Answer**	**Mark**	**Notes**
26	(a)		negative	1	B1 for negative
	(b)		10.3 - 11.7	2	M1 for a single straight line segment with negative gradient that could be used as a line of best fit **or** an indication on the diagram from 2.5 on the *x* axis A1 for an answer in the range 10.3 – 11.7 inclusive
*27		(17–2.8)×9.5 =134.9 $\pi\times(3.8\div2)^2$ =11.34.. 134.9 – 2×11.34 =112.21 112.21 ÷ 25 = 4.488	5	5	M1 for (17–2.8)×9.5 (=134.9) or 17×9.5– 2.8×9.5 (=161.5 - 26.6 = 134.9) M1 for $\pi\times(3.8\div2)^2$ (=11.33 – 11.35) M1(dep on M1) for '134.9' – 2×'11.34' A1 for 112 - 113 C1(dep on at least M1) for 'He needs 5 boxes' ft from candidate's calculation rounded up to the next integer.

1MA0_2F

Question		Working	Answer	Mark	Notes
*28		180 × 365 =65700 65700÷1000 =65.7 65.7×91.22 =5993.154 5993.154÷100 + 28.20= 88.13.. D U C T 366 65880 6010 88.30 365 65700 5993 88.13 65000 5929 87.49 66000 6020 88.40 364 65520 5976 87.96 360 64800 5911 87.31 ~~336~~ ~~60480~~ 5517 83.37	Decision (Should have a water meter installed)	5	**Per year** M1 for 180 × '365' (=65700) M1 for "65700"÷1000 (=65.7 or 65 or 66) M1 for "65.7"×91.22 (=5993.....) A1 for answer in range (£)87 – (£)89 C1(dep on at least M1) for conclusion following from working seen **OR (per day)** M1 for 107 ÷ '365' (=0.293…) M1 for 180 ÷ 1000 × 91.22 (=16.4196) M1 for 28.2 ÷ '365' + '0.164196' (units must be consistent) A1 for 29 – 30(p) and 24– 24.3(p) oe C1(dep on at least M1) for conclusion following from working seen **OR** M1 for (107 – 28.20) ÷ 0.9122 (=86.384..) M1 for '86.384..'×1000 (=86384.5…) M1 for '365' × 180 (=65700) A1 for 65700 and 86384.5.. C1(dep on at least M1) for conclusion following from working seen NB : Allow 365 or 366 or 52×7 (=364) or 12 × 30 (=360) or 365¼ for number of days