

Paper 1MA1: 3F				
Question	Working	Answer	Notes	
1		2100	B1	
2 (a)		$7x$	B1	
(b)		$8y^2$	B1	
3		1230	P1	for start to process eg. $6760 - 3879 - 1241 (=1640)$
			P1	for use of fraction eg. $'1640' \div 4$ or $1 - \frac{1}{4} \left(= \frac{3}{4} \right)$
			A1	
4 (a)		(3, 5)	B1	
(b)		Plotted	B1	
(c)		eg. (5,6) plotted	B1	
5	$(500 - 230 - 92 - 40) \div 2$	69p	P1	for start to process eg. $230 + 92$ or $500 - 40$
			P1	for complete process
			A1	for 69p or £0.69

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6 (a)		$\frac{15}{29}$	M1	for $\frac{15}{a}$ where $a > 15$ or $\frac{b}{29}$ where $b < 29$ or correct fraction for girls from a different class												
			A1													
(b)	11A +1G, 11B –1G 11C –1G, 11D + 1G	No + reason	M1	For complete method to find the sum of the signed differences in numbers of boys and girls or the totals of boys and girls in year 11												
			C1	'No' with correct argument eg. there are 38 boys and 38 girls												
(c)		Yes + reason	C1	'Yes' with eg as many calculations using the angles would be required oe												
7 (a)		8	B1													
(b)	$11 + 4 = 15$ $15 \div 3 = 5$	5	M1 A1	Start of method												
(c)	<table border="1"><tr><td>in</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td></tr><tr><td>out</td><td>-4</td><td>-1</td><td>2</td><td>5</td><td>8</td></tr></table>	in	0	1	2	3	4	out	-4	-1	2	5	8	2	M1 C1	For complete method that leads to answer e.g table of values or $x = 3x - 4$ For 2 or for statement that the equation has a unique solution
in	0	1	2	3	4											
out	-4	-1	2	5	8											
8		180	M1	For start to method e.g. $36 \div 4 (= 9)$ or 2×36												
			M1	For complete method to find no of cm in 1 yard or in 2 yards												
			A1													
9		351	M1	for 2.34×150 oe												
			A1													

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10	0.43, 0.428..., 0.438. 0.4375	$\frac{3}{7}$, 0.43, $\frac{7}{16}$, 43.8%, $\frac{7}{16}$	M1 A1	Converts numbers to common format e.g decimals to at least 3 d.p.
11 (i)		17	B1	
(ii)	1	16	B1	
12		48	P1 A1	For start to process eg. $96 \div 12$ or $96 \div 2$ cao
13 (a)(i) (ii)		33 The sum of the angles on a straight line is 180	B1 B1	The sum of the angles on a straight line is 180°
(b)	$(360 - 33 - 145) \div 2$	91	P1 A1	For a correct process to find angle ZWX
14	$2000 \div 5 = 400$ $2080 - 3 \times 400 = 880$ $880 \div 4$	400, 220	B1 P1 P1 A1	for 400 (weight of beans) Process to find total weight of 4 jars of jam Process to find weight of 1 jar of jam
15	$25 \div 5 \times 2 = 10$ $32 \div 2 = 16$ $\frac{10}{10+16}$	$\frac{10}{26}$	P1 P1 A1	Process to find number of boys walking and number of girls walking Complete process to find probability $\frac{10}{26}$ oe

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16		20	M1 M1 A1	for conversion of km to metres or hours to minutes for conversion of hours to seconds cao
17	(a) $2x + 2x - 2y + 2x + 2x - 2y$ (b) $8x$ and $4y$ are multiples of 4 Their difference must be a multiple of 4 Or $4(2x - y)$ is a multiple of 4	Shown Shown	M1 C1 M1 C1	For method to acquire correct inside lengths For completion For method to start argument eg. factorise expression For complete argument
18		252	P1 M1 P1 A1	For start to process eg. radius = $12 \div 4 (=3)$ Method to find area of trapezium or semicircle or circle Process to find area of the shaded region 251.7 – 252
19	(a) 550×3.5601 (b) $210 \div 7 \times 2 = 30 \times 2$ Or $60 \div 2 = 30$ and $30 \times 7 = 210$ (c)	1958 Shown Correct evaluation	M1 A1 M1 C1 C1	550×3.5601 For correct method to convert cost in UK to lira or vice versa, using Asif's approximation Shown with correct calculations For an evaluation e.g. It is a sensible start to the method because he can do the calculations without a calculator and 3.5 lira to the £ is a good approximation

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20 (a)	8, 13, 21,	34	B1 cao
(b)	$a, b, a + b, a + 2b, 2a + 3b$	Shown	M1 Method to show by adding pairs of successive terms $a + 2b, 2a + 3b$ shown
(c)	$3a + 5b = 29$ $a + b = 7$ $3a + 3b = 21$ $b = 4, a = 3$	$a = 3$ $b = 4$	C1 P1 P1 A1 Process to set up two equations Process to solve equations
21 (a)	Draws LOBF Finds $\text{ht} \div \text{base} = \frac{85 - 20}{0 - 25} = -2.6$	No + reason	M1 Interpret question eg. draw line of best fit $\frac{85 - 20}{0 - 25} = -2.6$ Start to test eg. gradient e.g. $\frac{85 - 20}{0 - 25} = -2.6$
(b)		The LOBF would have to be used outside the data	C1 C1 Gradient within range $\pm(2 - 3)$ and 'no' Convincing explanation
22		Have a water meter (from working with correct figures)	P1 P1 P1 P1 A1 Process to find number of litres eg. $180 \div 1000$ Full process to find cost per day Full process to find total cost of water used per year (accept use of alternative time period for both options) Full process with consistent units for total cost of water Correct decision from correct figures (88.13154 or correct figure for their time period)

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23 (a)	$\frac{388 - 320}{320} \times 100 =$	21.25	M1	For a complete method
(b)	A $388 \text{ (million)} \div 3200 =$ $\text{£}0.12125 \text{ million (}\text{£}121\,250\text{)}$ B $57 \text{ (million)} \div 640 =$ $\text{£}0.0890625 \text{ million (}\text{£}89062.50\text{)}$	Company A + evidence	A1	21.25%
			M1 A1	Method to find sales/person for A or B for 2014 $\text{£}121\,250$ or $\text{£}89062.50$
			C1	Company A with $\text{£}121\,250$ and $\text{£}89062.50$