

Paper 1MA1: 3F			
Question	Working	Answer	Notes
1		2100	B1
2 (a) (b)		7x $8y^2$	B1 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) (b) (c)		(3, 5) Plotted eg. (5,6) plotted	B1 B1 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)  (b)  (c)	11A +1G, 11B -1G 11C -1G, 11D + 1G	$\frac{15}{29}$	M1 for $\frac{15}{a}$ where $a > 15$ or $\frac{b}{29}$ where $b < 29$ <b>or</b> correct fraction for girls from a different class	A1												
		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												
		Yes + reason	C1	'No' with correct argument eg. there are 38 boys and 38 girls												
7 (a)  (b)  (c)	11 + 4 = 15 15 ÷ 3 = 5  <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	8	B1	
in	0	1	2	3	4											
out	-4	-1	2	5	8											
5	M1 A1	Start of method														
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														
8		180	M1	For start to method e.g. $36 \div 4(= 9)$ or $2 \times 36$												
			M1	For complete method to find no of cm in 1 yard <b>or</b> in 2 yards												
			A1													
9		351	M1 A1	for $2.34 \times 150$ oe												

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10	0.43, 0.428..., 0.438. 0.4375	$\frac{3}{7}$ , 0.43, $\frac{7}{16}$ , 43.8%,	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)		33	B1	The sum of the angles on a straight line is $180^\circ$
(ii)		The sum of the angles on a straight line is 180	B1	
(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 for conversion of km to metres or hours to minutes M1 for conversion of hours to seconds A1 cao	
17 (a)	$2x + 2x - 2y + 2x + 2x - 2y$	Shown	M1 For method to acquire correct inside lengths C1 For completion	
(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	M1 For method to start argument eg. factorise expression C1 For complete argument	
18		252	P1 For start to process eg. radius = $12 \div 4$ (=3) M1 Method to find area of trapezium or semicircle or circle P1 Process to find area of the shaded region  A1 $251.7 - 252$	
19 (a)	$550 \times 3.5601$	1958	M1 $550 \times 3.5601$ A1	
(b)	$210 \div 7 \times 2 = 30 \times 2$ Or $60 \div 2 = 30$ and $30 \times 7 = 210$	Shown	M1 For correct method to convert cost in UK to lira or vice versa, using Asif's approximation C1 Shown with correct calculations	
(c)		Correct evaluation	C1 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 ht÷base = $\frac{85 - 20}{0 - 25} = -2.6$	No + reason	M1	Interpret question eg. draw line of best fit
	(b)	The LOBF would have to be used outside the data	M1 C1 C1	Start to test eg. gradient e.g. $\frac{85 - 20}{0 - 25} = -2.6$ 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
			A1	21.25%
(b)	A $388 \text{ (million)} \div 3200 = \text{£}0.12125 \text{ million (£}121\ 250\text{)}$ B $57(\text{million}) \div 640 = \text{£}0.0890625 \text{ million (£}89062.50\text{)}$	Company A + evidence	M1 A1 C1	Method to find sales/person for A <b>or</b> B for 2014 £121 250 or £89062.50 Company A with £121 250 and £89062.50