

Paper 1MA1: 1F			
Question	Working	Answer	Notes
1		32	B1
2		80	B1
3	a	28	B1
	b	1020	B1
	c	-8	B1
4	i	5	B1
	ii	8	B1
5	a	(4, 5)	B1
	b	(1, 4)	B1
	c	Correct line	B1
6		5.25 litres	P1 for start to process eg. $5 \div 2 (=2.5)$ P1 for complete process eg. $5000 + 2.5 \times 100$ A1 or 5250 ml

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7 a		$\frac{1}{4}$	M1 For $\frac{x}{24}$ with $x < 24$ or $\frac{6}{y}$ with $y > 6$ A1 for $\frac{6}{24}$ oe
b		PP PM PW MM MW WW	M1 At least 3 correct combinations A1 Fully correct list with no extras or permutations
8		15	M1 For start to scaling process eg $12 \div 8$ or $10 \div 8$ A1 15
9 a		$\frac{5}{24}$	B1
b		$\frac{5}{14}$	M1 For using a correct common denominator A1 For $\frac{5}{14}$ oe
c		$2\frac{2}{3}$	M1 for $\frac{4}{5} \times \frac{10}{3}$ oe A1 for $2\frac{2}{3}$ or $\frac{8}{3}$

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Question	Working	Answer	Notes
10 a		-2	M1 For subtraction of 7 from both sides or division of all terms by 3 as first step of solution A1 cao
b		8	M1 For substitution $3 \times 6 - 2 \times 5$ A1 cao
11		8, 12, 20 or 4, 8, 28 or 4, 12, 24 or 4, 16, 20	P1 Adds 3 different multiples of 4 A1
12		700	P1 for process for total non-fiction books eg $\frac{1}{4} \times 80 (=20)$ P1 process for total takings for non fiction eg $20 \times \frac{1}{2} \times 10 (=100)$ P1 process to find total takings "100" + 60×10 A1 700
13	£5	£5	P1 for $\frac{25}{100} \times 60$ P1 for process to find difference between totals 20 – "15" A1 cao

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Question	Working	Answer	Notes	
14 a		chart	C1	For key or suitable labels to identify male and female
			C1	For linear scale
			C1	For chart (combined or separate) correctly showing data for at least 2 of swim, run, cycle
			C1	Fully correct chart with axes correctly scaled and labelled.
b		60	M1	$\frac{8+5+5}{30}$ or ft their diagram
			A1	60%
15 a		32	B1	32 cao
b		Correct reason	C1	Comment about grouped data in context
16		No with reason	M1	Starting reasoning $120 + 57 (= 177)$
			A1	Comparison of 177 with 180
			C1	Completes correct reasoning with reference to eg co-interior (or allied) angles total 180
17		35	M1	for method to find increase $108 - 80 (= 28)$
			M1	for method to find % increase eg $\frac{28}{80} \times 100$
			A1	cao

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Question	Working	Answer	Notes
18		D: $15 - x$ P: $\frac{20+x}{2}$	M1 For writing a correct expression for D or P before sweets are eaten $20 - x$ or $20 + x$ A1 One correct expression A1 Both correct expressions
19 a		$y(y+27)$	B1
b		t^6	B1
c		w^5	B1
20	$16 \div 4$ $\frac{1 \times 4}{2} = 2$ or $\frac{1}{2} \times \frac{1}{4} = \frac{1}{8}$ $\frac{2 \times 4}{2} = 4$ or $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$ $\frac{1 \times 4}{2} + \frac{2 \times 4}{2} = 6$ or $\frac{1}{2} \times \frac{1}{4} + \frac{1}{2} \times \frac{1}{2} = \frac{3}{8}$ $16 - 6 = 10$ or $1 - \frac{3}{8} = \frac{5}{8}$	$\frac{5}{8}$	P1 Using side lengths of 4 P1 Method to find fraction or area for one unshaded triangle P1 Method to complete fraction or area for total unshaded region P1 Method to find total fraction or area for shaded region A1 for $\frac{5}{8}$ oe or 0.625

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Question	Working	Answer	Notes
21 a	$\frac{1}{6} \times \frac{1}{5} \times 30 \times 5 = 5$ $(\frac{5}{6} \times \frac{1}{5} + \frac{1}{6} \times \frac{4}{5} + \frac{1}{6} \times \frac{1}{5}) \times 30 = 10$ $30 \times 1 - 5 - 10 \times 2$	5	P1 for identifying correct process to find probabilities for winning scores. May include use of tree diagram or sample space P1 for correct process to find prize money P1 for completing correct process to find profit A1 cao
b		Explanation	C1 for appropriate comment to interpret result eg probability so only likelihood not certainty, other than 30 may play, £5 is small difference.
22		No with reasoning	M1 Derive $AC=9$ cm and identify as hypotenuse M1 $4^2 + 7^2$ A1 for using eg $AC = \sqrt{4^2 + 7^2}$ or 65 and 81 C1 for concluding explanation that ABC is not a right-angled triangle with evidence.
23		500g	P1 $\frac{4}{5} \times 160 (=20)$ P1 '20' $\times 25$ A1 500 (or 0.5) B1 Correct units g (or kg)
24 (a)		72	B1 cao
(b)		65	B1 cao

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Question	Working	Answer	Notes
25		$2^3 \times 3^2 \times 7$	M1 for at least 3 correct divisions by a prime factor (may be seen in a factor tree) M1 for 2, 2, 2, 3, 3, 7 (condone inclusion of 1); may be seen in a factor tree A1