

Paper 1MA1: 1F			Notes
Question	Working	Answer	Notes
1		32	B1
2		80	B1
3		28	B1
a		1020	B1
b		-8	B1
c			
4		5	B1
i		8	B1
ii			
5		(4, 5)	B1
a		(1, 4)	B1
b		Correct line	B1
c			
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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Question	Working	Answer	Notes
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" + $60 \times 10$ 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 $\frac{5}{8}$ or 0.625

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

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