

Paper 1MA1: 1F			
Question	Working	Answer	Notes
1		5.3(0)	B1 cao
2		195	B1 cao
3		4.44	B1 cao
4		90	B1 cao
5		-27	B1 cao
6 (a)		5412	B2 (B1 for any 4-digit even number using 4,5,1,2 or 5421)
(b)		45, 54, 41, 14, 42, 24, 51, 15, 52, 25, 12, 21	P1 Starts to list systematically; at least 6 correct seen (ignore repeats)
			A1 Lists all 12 numbers (condone inclusion of all repeats 44, 55 etc)
7		chart	C1 for key or suitable labels to identify boys and girls C1 for 4 correct sport labels or a linear scale C1 for diagram or chart (combined or separate), correctly showing data for at least 3 sports C1 for fully correct diagram or chart with axes correctly scaled and labelled
8 (a)		example	C1 for appropriate example shown
(b)		example	C1 conclusion

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9		15561	M1 for complete method with relative place value correct (addition not necessary) M1 for addition of all appropriate elements A1 cao
10		No (supported)	P1 starts the process by converting one dimension A1 converts at least one measurement C1 conclusion eg No, since the 40 cm > 14 inches
11	(5) 3 (4) (12) 6 (7) 5 18 11 10 (9) (30)	table	C1 for at least 2 correct numbers C1 for at least 4 correct numbers C1 for completed table
12		1 : 3	M1 for stating a ratio eg 28 : 84 or 1 : 3 incorrectly stated or 3:1 A1 cao
13 (a)		drawing	C1 drawing of pattern number 4
(b)		42	C1 shows a process of working towards pattern number 20 C1 cao
(c)		$n + 2$	C1 begins process of stating algebraic expression eg n C1 $n + 2$ oe

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14 (a)		2000p-2600p	P1 Evidence of estimate eg. 4 or 50 used in calculation P1 complete process to solve problem A1 2000p-2600p or £20-£26
(b)		under	C1 underestimate as values have been rounded down
15		no with evidence	P1 interprets the information and the scale eg in calculations or shown as part of a diagram eg 8m x 24m (=192) or 8 x 20 (=160) P1 a correct process to fit boards into the space in a logical way or $150 \times 1 \times 1.2$ (=180) C1 “no” with supportive evidence eg showing 160 needed or $180 < 192$
16		32	M1 for method to find area of any one rectangle A1 cao
17		rotation	M1 for triangle in correct orientation or rotation 90° anticlockwise A1 cao
18		125	P1 for process to find $\frac{7}{20}$ of 500 (=175) or $\frac{7}{20} + \frac{4}{10}$ (=3/4) P1 for process to find 40% of 500 (=200) or $\frac{1}{4} \times 500$ A1 cao

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19 (a)		2.79	P1 begins to work with figures eg finding $7 \times \frac{3}{4}$ (=5.25) P1 works with integers eg 5.25 as 6 pints and 3×2 pints A1 cao
(b)		pay more	C1 deduces he may have to pay more [if he uses more than 0.857 pints a day]
20		42	P1 process to start problem solving eg forms an appropriate equation P1 complete process to solve equation A1 cao
21		4 m^2	C1 substitution into formula eg $35 = \frac{140}{A}$ A1 4 (oe) stated C1 (indep) units stated eg m^2
22		0.22	P1 begins process of subtraction of probabilities from 1 A1 oe
23		48	P1 begins to work with rectangle dimensions eg $l+w=7$ or $2 \times l+w$ (=11) C1 shows a result for a dimension eg using $l=4$ or $w=3$ P1 begins process of finding total area eg $4 \times "3" \times "4"$ A1 cao

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24		explanation	M1 works with volume eg 240000 M1 uses conversion 1 litre = 1000 cm ³ M1 uses 8000 eg vol ÷ 8000 (=30) M1 uses “30” eg “30” × 2.50 C1 for explanation and 75 stated begins working back eg 70÷2.50 uses conversion 1 litre = 1000 cm ³ uses 8000 eg “28”× 8000 (=224000) works with vol. eg 224000 for explanation with 240000 and 224000
25 (a) (b) (c)	Tot: H 300 T 100	Sharif Decision (supported) $\frac{9}{16}$	B1 Sharif with mention of greatest total throws P1 starts working with proportions A1 Conclusion: correct for Paul, but not for the rest; or ref to just Paul’s results P1 selects Sharif or overall and multiplies P(heads)×P(heads) eg $\frac{3}{4} \times \frac{3}{4}$ A1 oe
26 (a) (b)		$\frac{\sqrt{3}}{2}$ 6	B1 M1 starts process eg $\sin 30 = \frac{x}{12}$ A1 answer given
27		x^2+2x-3	M1 starts expansion: at least 3 terms correct with signs, or four terms correct ignoring signs A1 for x^2+2x-3

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28		$(x+4)(x-4)$	B1	for $(x+4)(x-4)$
29		$x=7, y=-3$	M1 M1 A1	for correct process to eliminate one variable (condone one arithmetic error) (dep) for substituting found value in one of the equations or appropriate method after starting again (condone one arithmetic error) for both correct solutions