| **Paper 1MA1: 1F** |  |  |
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| **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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| **Question** | **Working** | **Answer** | **Notes** |
| 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 | P1 | starts the process by converting one dimension |
|  |  |  | (supported) | A1 | converts at least one measurement |
|  |  |  |  | C1 | conclusion eg No, since the 40 cm > 14 inches |
| 11 |  | (5) **3** (4) (12) | table | C1 | for at least 2 correct numbers |
|  |  | **6**  (7) **5 18** |  | C1 | for at least 4 correct numbers |
|  |  | **11 10** (9) (30) |  | 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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| **Question** | **Working** | **Answer** | **Notes** |
| 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 |  |  | nowith | 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) |
|  |  |  | evidence | P1 | a correct process to fit boards into the space in a logical way or 150×1×1.2 (=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 7/20 of 500 (=175) or 7/20 + 4/10 (=3/4) |
|  |  |  |  | P1 | for process to find 40% of 500 (=200) or ¼ × 500 |
|  |  |  |  | A1 | cao |

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| **Question** | **Working** | **Answer** | **Notes** |
| 19 | (a) |  |  | P1 | begins to work with figures eg finding 7× ¾ (=5.25) |
|  |  |  |  | P1 | works with integers eg 5.25 as 6 pints and 3 × 2 pints |
|  |  |  | 2.79 | 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 m2 | C1 | substitution into formula eg  |
|  |  |  |  | A1 | 4 (oe) stated |
|  |  |  |  | C1 | (indep) units stated eg m2  |
| 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×*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 × “3” × “4” |
|  |  |  |  | A1 | cao |

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| **Question** | **Working** | **Answer** | **Notes** |
| 24 |  |  | explanation | M1 | works with volume eg 240000 | begins working back eg 70÷2.50 |
|  |  |  |  | M1 | uses conversion 1 litre = 1000 cm3 | uses conversion 1 litre = 1000 cm3 |
|  |  |  |  | M1 | uses 8000 eg vol ÷ 8000 (=30) | uses 8000 eg “28”× 8000 (=224000) |
|  |  |  |  | M1 | uses “30” eg “30” × 2.50 | works with vol. eg 224000 |
|  |  |  |  | C1 | for explanation and 75 stated | for explanation with 240000 and 224000 |
| 25 | (a) |  | Sharif | B1 | Sharif with mention of greatest total throws |
|  | (b) |  | Decision | P1 | starts working with proportions |
|  |  |  | (supported) | A1 | Conclusion: correct for Paul, but not for the rest; or ref to just Paul’s results |
|  | (c) | Tot: H 300 T 100 |  | P1 | selects Sharif or overall and multiplies P(heads)×P(heads) eg ¾ × ¾  |
|  |  |  |  | A1 | oe |
| 26 | (a) |  |  | B1 |  |
|  | (b) |  | 6 | M1 | starts process eg  |
|  |  |  |  | A1 | answer given |
| 27 |  |  | *x*2+2*x*−3 | M1 | starts expansion: at least 3 terms correct with signs, or four terms correct ignoring signs |
|  |  |  |  | A1 | for *x*2+2*x*−3 |

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