

| Paper: 1MA1/1H |        |      |   |   |
|----------------|--------|------|---|---|
| Question       | Answer | Mark | Mark scheme   | Additional guidance   |
| 2              | 140    | P1   | for beginning to solve the problem<br>eg $50 \div 5 \times 8 (= 80)$ <b>or</b> $14 : 8 : 5$ oe <b>or</b> $14 : 8$ and $8 : 5$ oe (linked) | 80 may be seen in the ratio $80 : 50$                           |
| <b>Q1</b>      |        | P1   | for a full process to solve the problem<br>eg “80” $\div 4 \times 7$ <b>or</b> $\frac{50}{5} \times$ “14” <b>or</b> $140 : 80 : 50$       |   |
|                |        | A1   | cao   | If 140 clearly identified as houses in working award full marks |

| Paper: 1MA1/1H |         |          |      |  |
|----------------|---------|----------|------|--|
| Question       | Working | Answer   | Mark | Notes  |
| 2              |         | 14:21:42 | P1   | for 2 out of 3 expressions in one letter eg from $x, x+7, 2x+14$ <b>or</b> see a set of numbers to show interpretation of the relationships, eg 10, 17, 34 |
| <b>Q2</b>      |         |          | P1   | (dep) for sum of their 3 expressions =77 eg $x + x+7+2x+14 =77$ oe <b>or</b> 2 systematic correct trials including addition                                |
|                |         |          | P1   | for a correct process to isolate their term in $x$ <b>or</b> $x=14$  |
|                |         |          | A1   | for ratio 14:21:42 oe  |

| Paper: 1MA1/1H |  |                          |      |  |
|----------------|--|--------------------------|------|--|
| Question       | Working                                | Answer                   | Mark | Notes  |
| 14             |  | $y = \frac{x(k+1)}{k-1}$ | M1   | $y + x = k(y - x)$ <b>or</b> $\frac{y+x}{y-x} = k$ oe            |
| <b>Q3</b>      | $ky - y = x + kx$<br>$y(k-1) = x(1+k)$ |                          | M1   | For isolating $x$ and $y$ on opposite sides eg $ky - y = x + kx$ |
|                |  |                          | A1   | Completing correct algebraic reasoning to reach conclusion       |

| Paper: 1MA1/3H |         |        |      |  |
|----------------|---------|--------|------|--|
| Question       | Working | Answer | Mark | Notes  |
| 4              |         | 15     | P1   | strategy to start the problem, eg 8:20 and 20:5                        |
| <b>Q4</b>      |         |        | P1   | process to solve the problem, eg $\frac{5}{33} \times 100$ or 24:60:15 |
|                |         |        | A1   | cao  |

| Paper: 1MA1/1H |         |               |      |  |
|----------------|---------|---------------|------|--|
| Question       | Working | Answer        | Mark | Notes  |
| 14             |         | $\frac{1}{3}$ | P1   | process to solve the problem e.g. $\frac{3}{10} \times \frac{4}{9} (= \frac{12}{90} = \frac{2}{15})$ OR finds the number of white circles for their chosen number OR for 9 : 21 (or a multiple of 9 : 21)  |
| <b>Q5</b>      |         |               | P1   | second step of the process e.g. $\frac{7}{10} \times \frac{2}{7} (= \frac{14}{70} = \frac{2}{10} = \frac{1}{5})$ OR finds the number of black circles for their chosen number OR for a multiple of 2 : 5 where the ratio parts sum to "21"                               |
|                |         |               | P1   | for complete process e.g. " $\frac{2}{15}$ " + " $\frac{1}{5}$ " $\left( = \frac{4}{30} + \frac{6}{30} \right)$ OR finds the total number of circles for their chosen number OR for 3 ratios that could be used to solve the problem<br>eg 9 : 21 with 4 : 5 with 6 : 15 |
|                |         |               | A1   | for $\frac{1}{3}$ oe   |

| Paper: 1MA1/2H |         |                        |  |   |
|----------------|---------|------------------------|--|---|
| Question       | Working | Answer                 | Mark   | Notes   |
| 2              |         | Yes<br><br>(supported) | P1<br><br>P1<br><br>A1<br><br>P1<br><br>C1<br><br><br><br>P1<br><br>P1<br><br>A1<br><br>P1<br><br>C1 | for process to work out the total number of children, e.g. $117 \times 4 (= 468)$<br><br>(dep P1) for process to work out total number of adults or the total number of people, e.g. “468” $\times 5 \div 2 (= 1170)$ or “468” $\times 7 \div 2 (= 1638)$<br><br>for 1170 or 1638<br><br>for process to work out the percentage of theatre full, e.g. $\frac{“468”+“1170”}{2600} \times 100 (= 63)$ or for a process to work out 60% of 2600 ( $= 1560$ )<br><br>for a correct conclusion supported by correct figures e.g. 63% or 1560 <b>and</b> 1638<br><br>OR<br><br>for a process to work out 60% of 2600, eg. $\frac{60}{100} \times 2600 (= 1560)$<br><br>(dep P1) for process to work out this total number of children, e.g. “1560” $\times 2 \div 7 (= 445(.7\dots))$<br><br>for 445(.7\dots)<br><br>for process to work out children in the circle, eg. “445(.7\dots)” $\div 4 (= 111 \text{ to } 112)$<br><br>for a correct conclusion supported by correct figures e.g. 111 to 112<br>[Where appropriate accept rounded or truncated values] |
| <b>Q6</b>      |         |                        |  |   |

| Paper 1MA1: 3H |         |        |  |  |
|----------------|---------|--------|--|--|
| Question       | Working | Answer | Mark   | Notes  |
| 4              |         | 68     | P1<br>P1<br>P1<br>P1<br>A1<br>OR<br>P1<br>P1<br>P1<br>P1<br>A1 | for a process to find the number of vanilla cakes, eg $420 \times 2 \div 7$ oe (= 120)<br>for a process to find the number of banana cakes, eg $420 \times 0.35$ oe (= 147)<br>(dep P1) for a full process to find the number of lemon/chocolate cakes<br>eg $420 - (\text{vanilla cakes}) - (\text{banana cakes})$ (= 153)<br>(dep on previous P1) for a process to find the number of lemon cakes<br>eg " $153 \div 9 \times 4$ " oe (= 68)<br>cao<br>OR<br>for writing two proportions in the same format<br>for combining the proportions of vanilla and banana cakes<br>eg $2/7 + 7/20$ (= $89/140$ )<br>(dep P1) for a full process to find the proportion or number of lemon/chocolate cakes<br>eg $1 - "89/140"$ (= $51/140$ )<br>(dep on previous P1) for a process to find the number of lemon cakes<br>eg " $51/140 \times 420 \div 9 \times 4$ " (= 68)<br>cao |
| <b>Q7</b>      |         |        |  |  |

| Paper 1MA1: 3H |         |            |      |  |
|----------------|---------|------------|------|--|
| Question       | Working | Answer     | Mark | Notes  |
| 12             |         | 3 : 4 : 11 | P1   | Makes a start e.g. by using multipliers e.g. $1 + 5 = 6$ and $7 + 11 = 18$ and $6 \times 3 = 18$ or $AB:BD = 3:15$ or $x=3y$ (appropriate x and y shown) or $\frac{1}{6} = \frac{3}{18}$ |
| <b>Q8</b>      |         |            | P1   | Complete process to find ratios e.g. $(7 + 11) \div (1 + 5) = 3$ and   |
|                |         |            | A1   | $1 \times "3" : 7 - ("3" \times 1) : 11$<br>oe   |



| Paper: 1MA1/1H |        |      |  |  |
|----------------|--------|------|--|--|
| Question       | Answer | Mark | Mark scheme  | Additional guidance  |
| 2 (a)          | 600    | P1   | for starting process to calculate amount of flour<br>eg $60 \div 15 (= 4)$ <b>or</b> $3 \times 50 (= 150)$ | 4 implied by 200g of sugar   |
| <b>Q9</b>      | 2      | P1   | for complete process eg $\frac{60}{15} \times "150"$   |  |
|                |        | A1   | cao  |  |
|                |        | P1   | for process to calculate amount of butter<br>eg $\frac{60}{15} \times 2 \times 50 (= 400)$                 |  |
| (b)            |        |      | <b>OR</b> for process to calculate the number of packs of butter needed<br>eg $[\text{butter}] \div 250$   | [butter] must be clearly stated or calculated, may be seen in part (a) |
|                |        | A1   | cao  | 2 must not come from incorrect working                                 |

| Paper: 1MA1/1H |        |      |  |   |
|----------------|--------|------|--|---|
| Question       | Answer | Mark | Mark scheme  | Additional guidance   |
| 6              | 96     | P1   | for process to find the ratio of the number of pens of each colour sold,<br>eg $2 \times 7 : 5 \times 3 : 6 \times 4$ (= 14 : 15 : 24)                   | Does not have to be seen as a ratio but all three needed<br><br>P3 can be implied by the values 56, 60 and 96 |
| <b>Q10</b>     |        | P1   | for process to find the proportion of green pens sold,<br>eg $\frac{212}{"14"+"15"+"24"}$ or $\frac{"24"}{"14"+"15"+"24"}$                               |   |
|                |        | P1   | for a complete process to find the number of green pens sold,<br>eg $\frac{212}{"14"+"15"+"24"} \times "24"$ or $\frac{"24"}{"14"+"15"+"24"} \times 212$ |   |
|                |        | A1   | cao  |   |

| Paper: 1MA1/2H |        |      |   |                     |
|----------------|--------|------|---|---------------------|
| Question       | Answer | Mark | Mark scheme   | Additional guidance |
| 7              | 168    | P1   | for working with ratio to find the amount for C or D<br>eg $1.5 \times 2 (=3)$ or (A, B, C, D =) 2, 7, 3, 3 oe<br><b>OR</b> for suitable expressions linking A with C or D, eg. $A = x, C = 1.5x$ |                     |
| Q11            |        | P1   | for “2 + 3 + 3 + 7” (=15)<br><b>OR</b> adds 4 suitable expressions, eg. “ $x + 3.5x + 1.5x + 1.5x$ ” (= 7.5x)   |                     |
|                |        | P1   | for a complete process to find the amount of money<br>eg $360 \div “15” \times 7$<br><b>OR</b> $360 \div “7.5” \times 3.5$  |                     |
|                |        | A1   | cao   |                     |

| Paper: 1MA1/2H |             |      |  |  |
|----------------|-------------|------|--|--|
| Question       | Answer      | Mark | Mark scheme  | Additional guidance                                |
| 17 (a)         | Explanation | C1   | For stating the LCM of (4+7) and (5+3) is 88 <b>or</b> there is no smaller multiple of 8 and 11 (than 88)  |  |
|                |             | P1   | for using a scale factor appropriately eg $4 \times 8 (=32)$ <b>or</b> $3 \times 11 (=33)$ <b>or</b> $7 \times 8 (=56)$ <b>or</b> $5 \times 11 (=55)$<br><b>or</b> for writing a pair of suitable fractions, eg $\frac{7}{11}$ and $\frac{3}{8}$ <b>or</b> $\frac{4}{11}$ and $\frac{5}{8}$<br><b>or</b> $\frac{3}{8}$ and $\frac{4}{11}$  | May be seen in a two-way table or probability tree |
|                |             | P1   | for finding the number of large cubes and red cubes <b>or</b> small and yellow <b>or</b> small and red<br>eg $7 \times 8 (=56)$ and $3 \times 11 (=33)$ <b>or</b> $4 \times 8 (=32)$ and $5 \times 11 (=55)$ <b>or</b> $4 \times 8 (=32)$ and $3 \times 11 (=33)$<br><b>OR</b> a suitable fractional equation, eg $\frac{7}{11} - x = \frac{3}{8}$ <b>or</b> $\frac{5}{8} - x = \frac{4}{11}$<br><b>or</b> $x = 1 - \frac{3}{8} - \frac{4}{11}$<br><b>OR</b> a suitable pair of probabilities with a common denominator,<br>eg $\frac{56}{88}$ and $\frac{33}{88}$ <b>or</b> $\frac{32}{88}$ and $\frac{55}{88}$ <b>or</b> $\frac{33}{88}$ and $\frac{32}{88}$ | May be seen in a two-way table or probability tree |
| A1             | cao         |      | $\frac{23}{88}$ scores P2A0  |  |

Q12

| Paper: 1MA1/1H |             |      |   |   |
|----------------|-------------|------|---|---|
| Question       | Answer      | Mark | Mark scheme   | Additional guidance   |
| 10             | 6 : 15 : 20 | P1   | <p>chooses a multiplier to equate the two fractions in terms of <math>b</math></p> <p>eg <math>\frac{2}{5} \times \frac{3}{3} (= \frac{6}{15})</math> <b>or</b> <math>\frac{3}{4} \times \frac{5}{5} (= \frac{15}{20})</math></p> <p><b>or</b> lists equivalent fractions to <math>\frac{2}{5}</math> up to at least <math>\frac{6}{15}</math>, eg. <math>\frac{2}{5}, \frac{4}{10}, \frac{6}{15}, \dots</math></p> <p><b>or</b> lists equivalent fractions to <math>\frac{3}{4}</math> up to at least <math>\frac{15}{20}</math>, eg. <math>\frac{3}{4}, \frac{6}{8}, \frac{9}{12}, \frac{12}{16}, \frac{15}{20}, \dots</math></p> <p><b>or</b> <math>(a : b =) 2 : 5</math> <b>and</b> <math>(b : c =) 3 : 4</math></p> <p><b>or</b> for 6 : 15 or 15 : 20 seen</p> |   |
| <b>Q13</b>     |             | P1   | <p>puts into related terms ready for ratio eg <math>\frac{2}{5} \times \frac{3}{3} = \frac{6}{15}</math> <b>and</b> <math>\frac{3}{4} \times \frac{5}{5} = \frac{15}{20}</math></p> <p><b>or</b> for <math>(a : b =) 6 : 15</math> <b>and</b> <math>(b : c =) 15 : 20</math></p> <p><b>or</b> lists equivalent ratios up to a common element for <math>b</math>,<br/>eg <math>a : b = 2 : 5, 4 : 10, 6 : \underline{15}</math> <b>and</b> <math>b : c = 3 : 4, 6 : 8, 9 : 12, 12 : 16, \underline{15} : 20</math></p>   | Need not be written in ratio form                               |
|                |             | A1   | for 6 : 15 : 20 oe  | Accept equivalent ratios<br>Accept $a = 6, b = 15$ and $c = 20$ |

| Paper: 1MA1/2H |             |      |   |  |
|----------------|-------------|------|---|--|
| Question       | Answer      | Mark | Mark scheme   | Additional guidance  |
| Q14            | No          | P1   | for $3000 \div (2 + 3) (= 600)$   |  |
|                | (supported) | P1   | for “600” $\times 2 (= 1200)$ <b>or</b> “600” $\times 3 (= 1800)$<br><b>or</b> “600” $\div 6 (= 100)$ <b>or</b> “600” $\div 20 (= 30)$                              |  |
|                |             | P1   | for “1200” $\div 6 (= 200)$ <b>or</b> “1800” $\div 20 (= 90)$<br><b>or</b> “100” $\times 2 (= 200)$ <b>or</b> “30” $\times 3 (= 90)$                                |  |
|                |             | P1   | for “90” $\div (“200” + “90”) \times 100 (= 31.0\dots)$ oe<br><b>or</b> “90” $\div (“200” + “90”) (= 0.31\dots)$<br><b>or</b> $0.3 \times (“200” + “90”) (= 87)$ oe | Full method to compare   |
|                |             | C1   | correct conclusion <b>and</b> fully correct calculations with accurate figure<br>eg No and 87 <b>or</b> No and 31% <b>or</b> No and 0.31                            | No working, answer only no marks<br>No may be implied by a statement |

| Paper: 1MA1/3H |        |      |  |   |
|----------------|--------|------|--|---|
| Question       | Answer | Mark | Mark scheme  | Additional guidance   |
| 21 (a)         | 3 : 4  | P1   | for start of process,<br>eg isolate terms in $c$ , eg $4c = 3d$<br><br><b>or</b> divide all terms by $d$ , eg $\frac{5c}{d} + 1 = \frac{c}{d} + 4$   | Accept any equivalent ratio or $c = 3, d = 4$                     |
|                |        | A1   | for 3 : 4  |   |
|                | 5 : 2  | P1   | for start of process:<br>to take all terms to one side eg $6x^2 - 7xy - 20y^2 (= 0)$<br><br><b>or</b> divide all terms by $y^2$ , eg $\frac{6x^2}{y^2} = \frac{7xy}{y^2} + \frac{20y^2}{y^2}$<br><br><b>or</b> substitute a value of $x$ ( $x > 0$ ) or a value of $y$ ( $y > 0$ ) into the equation,<br>eg $x = 5, 150 = 35y + 20y^2$ |   |
|                |        | P1   | for second step in process,<br>eg $(2x - 5y)(3x + 4y) (= 0)$ <b>or</b> $6p^2 - 7p - 20 (= 0)$ (where $p = \frac{x}{y}$ )<br><br><b>or</b> $20y^2 + 35y - 150 (= 0)$  |   |
| Q15            |        | A1   | 5 : 2  | Accept $x = 5, y = 2$ or equivalent ratios, eg, $1 : \frac{2}{5}$ |

| Paper: 1MA1/1H |        |      |  |                     |
|----------------|--------|------|--|---------------------|
| Question       | Answer | Mark | Mark scheme  | Additional guidance |
| 5              | 33     | P1   | for relating 24 to 8 parts <b>or</b> (1 part =) $24 \div 8 (= 3)$<br><br><b>or</b> for $15 - 7 (= 8)$<br><br><b>or</b> starts to use a build-up method, eg (8 :) 14 : 30 | 8 parts = 24        |
| <b>Q16</b>     |        | P1   | for $15 - 4 (= 11)$ <b>and</b> $24 \div 8 (= 3)$<br><br><b>or</b> $15 \times 3 (= 45)$ <b>and</b> $4 \times 3 (= 12)$<br><br><b>or</b> for $12 (: 21) : 45$              |                     |
|                |        | A1   | cao  |                     |



| Paper: 1MA1/3H |                              |      |   |   |
|----------------|------------------------------|------|---|---|
| Question       | Answer                       | Mark | Mark scheme   | Additional guidance                               |
| 2              | 12.85 or 12.86<br>or 13.5(0) | P1   | for $9 + 2 + 1 (= 12)$  | Award this mark for sight of 4500, 1000 or 500    |
| <b>Q17</b>     |                              | P1   | for working out how many lots of 175g are needed<br>eg $6000 \div "12" \times 2 \div 175 (= 5.71\dots)$ | Process may lead to 5 or 6 instead of 5.71...     |
|                |                              | P1   | for a complete process eg $"5.71\dots" \times 2.25 (= 12.857\dots)$                                     | "5.71..." (ft) may be rounded or truncated.eg "6" |
|                |                              | A1   | for 12.85 or 12.86 or 13.5(0)   |   |

| Paper: 1MA1/3H |                |      |  |   |
|----------------|----------------|------|--|---|
| Question       | Answer         | Mark | Mark scheme  | Additional guidance   |
| 14             | 8 : 12 : 9 : 1 | P1   | for $2 + 3 (= 5)$ and $9 + 1 (= 10)$<br><br>OR<br><br>for assigning a total number of sweets for $F + G$ and $O + J$<br>eg $F + G = 100$ , $O + J = 50$  | May be in algebraic form, eg $2a + 3a (= 5a)$<br>and $9a + 1a (= 10a)$<br><br>May be in algebraic form,<br>eg $F + G = 5a$ , $O + J = 2.5a$ |
| <b>Q18</b>     |                | P1   | for finding correct multiplier for relationship between totals for $F + G$ and $O + J$ eg $\times 4$ to get from 5, 10 to 20, 10<br><br>OR<br><br>for working out the number of sweets from their totals for $F, G$ eg 40, 60 or for $O, J$ , eg 45, 5 |   |
|                |                | P1   | for $2 \times 4 (= 8)$ and $3 \times 4 (= 12)$<br><br>OR<br><br>for ratio in unsimplified form, eg $40 : 60 : 45 : 5$  |   |
|                |                | A1   | cao  |   |

| Paper: 1MA1/2H |        |      |  |  |
|----------------|--------|------|--|--|
| Question       | Answer | Mark | Mark scheme  | Additional guidance  |
| Q19            | 4 : 1  | P1   | for associating algebraic expressions with the correct ratio<br>eg $p - 5 : q - 5$ (= 5 : 1) or $p + 20 : q + 20$ (= 5 : 2)  | Award for one of the two simultaneous equations<br>eg $5q - p = 20$ , $5q - 2p = -60$ oe<br><br>Award for a simultaneous equation method to<br>eliminate one variable leading to either $p = 80$ or<br>$q = 20$<br><br>Award for a simultaneous equation method to<br>eliminate both variables leading to either $p = 80$<br><b>and</b> $q = 20$ |
|                |        | P1   | for $\frac{p+20}{q+20} = \frac{5}{2}$ <b>or</b> $\frac{p-5}{q-5} = \frac{5}{1}$ oe<br><br><b>or</b> $p - 5 = 5(q - 5)$ <b>or</b> $2(p + 20) = 5(q + 20)$ oe                                  |  |
|                |        | M1   | for a complete method shown to find $p$ <b>or</b> $q$  |  |
|                |        | M1   | for a complete method shown to find $p$ <b>and</b> $q$<br><b>or</b> two values for $p$ and $q$ that are in the ratio 4 : 1 or an unsimplified ratio 4 : 1 (eg 80 : 20) or an answer of 1 : 4 |  |
|                |        | A1   | cao  |  |

| Paper: 1MA1/1H |             |      |   |   |
|----------------|-------------|------|---|---|
| Question       | Answer      | Mark | Mark scheme   | Additional guidance   |
| <b>Q20</b>     | 2           | P1   | for a process to find the number of men, eg. $(60 \div 2) \div 3 (= 10)$  | <p><math>60 \div 3 = 20</math> scores no marks</p> <p>Any ratio must come from correct processes to find the number of children and the number of men</p> <p>Award 0 marks for 2 with no correct supportive working</p> <p>Award full marks for 2 : 1 given as a final answer from correct supportive working</p> |
|                | (supported) | P1   | for a process to find the number of children, eg. $60 - "30" - "10" (= 20)$   |   |
|                |             | P1   | for a start of a process to find the value of $n$ ,<br>eg. $("20" : "10") \div 5$ or $20 : 10 = 10 : 5$ or $"20" \div "10"$ |   |
|                |             | A1   | for 2 with supportive working   |   |

| Paper: 1MA1/2H |        |      |  |                                      |
|----------------|--------|------|--|--------------------------------------|
| Question       | Answer | Mark | Mark scheme  | Additional guidance                  |
| 3              | 18     | P1   | for $240 \div 10 (= 24)$ <b>or</b> $240 \div 8 (= 30)$   | Accept $3 + 7$ for 10, $3 + 5$ for 8 |
| <b>Q21</b>     |        | P1   | for $3 \times "24" (= 72)$ <b>or</b> $7 \times "24" (= 168)$ <b>or</b> $3 \times "30" (= 90)$<br><b>or</b> $5 \times "30" (= 150)$   |                                      |
|                |        | P1   | for $3 \times "24" (= 72)$ <b>and</b> $3 \times "30" (= 90)$<br><b>or</b> $7 \times "24" (= 168)$ <b>and</b> $5 \times "30" (= 150)$ |                                      |
|                |        | A1   | Cao  |                                      |

| Paper: 1MA1/3H |                 |      |  |   |
|----------------|-----------------|------|--|---|
| Question       | Answer          | Mark | Mark scheme  | Additional guidance                       |
| 14             | $\frac{13}{20}$ | P1   | for finding the fraction who chose either soup ( $\frac{2}{5}$ oe) or chose prawns ( $\frac{3}{5}$ oe)<br><b>or</b> for process to share any number in the ratio 2 : 3<br>eg $100 \div (2 + 3) \times 2$ (=40)   | Starting number 100<br>Soup : Prawn 40:60 |
|                |                 | P1   | for a process that could lead to the proportion who chose lasagne or curry for either starter,<br>eg sharing 40% (soup) in the ratio 5 : 3<br><b>or</b> sharing 60% (prawns) in the ratio 1 : 5<br><b>or</b> $\frac{2}{5} \times \frac{5}{8}$ <b>or</b> $\frac{2}{5} \times \frac{3}{8}$ <b>or</b> $\frac{3}{5} \times \frac{1}{6}$ <b>or</b> $\frac{3}{5} \times \frac{5}{6}$<br><br><b>or</b> for continuing the process with their starting number to find the number who chose lasagne or curry for either starter | L:C      L:C<br>25:15    10:50            |
|                |                 | P1   | for a complete process to find the proportion who chose curry for <b>both</b> starters,<br>eg $(\frac{2}{5} \times \frac{3}{8}) + (\frac{3}{5} \times \frac{5}{6})$ <b>or</b> to find the number who chose curry for <b>both</b> starter for their starting number   | $15 + 50 = 65$ and $\frac{15+50}{100}$    |
|                |                 | A1   | $\frac{13}{20}$ or equivalent fraction   |   |

Q22

| Paper: 1MA1/1H |        |                                    |  |   |
|----------------|--------|------------------------------------|--|---|
| Question       | Answer | Mark                               | Mark scheme  | Additional guidance                           |
| 6              | (a)(i) | P1                                 | for process to compare ratios,<br>eg $a : b = 2 : 6$ or $b : c = 3 : 2.5$  | Could use 3 or any common multiple of 3 and 6 |
|                |        | A1                                 | for 2 : 6 : 5 oe   |   |
|                | (ii)   | M1                                 | for process to find fraction, eg $\frac{[2]}{[2+6+5]}$ or for $\frac{a}{a+b+c}$  |   |
|                | A1     | for $\frac{2}{13}$ oe or ft (a)(i) |  |   |
| Q23            | (b)    | P1                                 | for process to express all numbers in terms of one number,<br>eg $p = 5 \times 2m (= 10m)$ or $m = \frac{n}{2}$<br><br><b>or</b> for $2m = \frac{p}{5}$<br><br><b>or</b> for assigning values in the ratio given,<br>eg $m = 1, n = 2, p = 10$<br><br><b>or</b> for $n : m : p = 2 : 1 : 10$ oe<br><br><b>or</b> 10 : 1 oe |   |
|                |        | A1                                 | for 1 : 10 oe  |   |

| Paper: 1MA1/3H |                   |      |  |                     |
|----------------|-------------------|------|--|---------------------|
| Question       | Answer            | Mark | Mark scheme  | Additional guidance |
| 17             | 42 : 63 : 15 : 20 | P1   | for a first step to write a relationship between 2 weights,<br>eg $A + B : C + D = 3 : 1$ or $A : B = 2 : 3$ or $C : D = 3 : 4$<br>or $A + B = 3(C + D)$ or $A = \frac{2}{3}B$ or $C = \frac{3}{4}D$   |                     |
| <b>Q24</b>     |                   | P1   | for giving all 3 relationships in the same form<br>eg $A + B : C + D = 3 : 1$ and $A : B = 2 : 3$ and $C : D = 3 : 4$<br>or $A + B = 3(C + D)$ and $A = \frac{2}{3}B$ and $C = \frac{3}{4}D$   |                     |
|                |                   | P1   | for complete process to link all 4 weights,<br>eg $\frac{2}{3}B + B = 3\left(\frac{3}{4}D + D\right)$ and $A = \frac{2}{3}B$ and $C = \frac{3}{4}D$<br>or $A : B : C : D = A : 63 : C : 20$ and $A = \frac{2}{3}B$ and $C = \frac{3}{4}D$<br>or $C : D = 3 : 4$ and $A : B : D = 42 : 63 : 20$ |                     |
|                |                   | A1   | oe   |                     |



| Paper: 1MA1/1H |        |      |  |  |
|----------------|--------|------|--|--|
| Question       | Answer | Mark | Mark scheme  | Additional guidance  |
| Q25            | 30     | P1   | for $160 \div (3+7) (= 16)$ <b>or</b> $\frac{3}{3+7} (= \frac{3}{10})$   |  |
|                |        | P1   | for “16” $\times 3 (= 48)$ <b>or</b> “ $\frac{3}{10}$ ” $\times 160 (= 48)$  |  |
|                |        | P1   | for a correct step using 48<br>eg “48” $\div 8 (= 6)$ <b>or</b> “48” $\times 25 \div 100 (= 12)$<br><b>or</b> (indep) for combining $\frac{1}{8}$ and 25%,<br>eg $\frac{1}{8} + \frac{1}{4} (= \frac{3}{8})$ or “0.125” + “0.25” (= 0.375)<br>or “12.5”(%) + 25(%) (= 37.5(%)) |  |
|                |        | P1   | for a complete process to find the number of petrol cars,<br>eg “48” – “6” – “12” oe <b>or</b> $(1 - \frac{3}{8}) \times “48”$ oe<br><b>or</b> “ $\frac{3}{10}$ ” $\times (1 - \frac{3}{8}) \times 160$ oe   |  |
|                |        | A1   | cao<br><br>SC B2 for an answer of 100 if P0 scored   | Award no marks for a correct answer with no supportive working |

| Paper: 1MA1/1H |        |      |  |                     |
|----------------|--------|------|--|---------------------|
| Question       | Answer | Mark | Mark scheme  | Additional guidance |
| 11             | 8      | P1   | for a start to the process,<br>eg $\frac{9}{9+4+x}$ <b>or</b> $\left(\frac{3}{7} = \frac{9}{21}\right)$        |                     |
| <b>Q26</b>     |        |      | <b>or</b> states that the total number of sweets is 21   |                     |
|                |        | P1   | for forming a correct equation without fractions,<br>eg $9 \times 7 = 3(9 + 4 + x)$ <b>or</b> $21 = 9 + 4 + x$ |                     |
|                |        |      | <b>OR</b> for $21 - 9 - 4$ oe <b>or</b> $1 - \frac{9}{21} - \frac{4}{21} (= \frac{8}{21})$                     |                     |
|                |        | A1   | cao  |                     |

| Paper: 1MA1/2H |                |      |   |                     |
|----------------|----------------|------|---|---------------------|
| Question       | Answer         | Mark | Mark scheme   | Additional guidance |
| Q27            | (M) 18, (K) 15 | P1   | for start of process, eg $(6x + 1.5)$ <b>and</b> $(5x + 1.5)$<br><b>or</b> $(6x + 1.5)$ <b>and</b> $(11x + 3)$<br><b>or</b> $a + 1.5$ <b>and</b> $b + 1.5$<br><br><b>OR</b> starts to work with ratio, eg $6 : 5 = 12 : 10$   |                     |
|                |                | P1   | for setting up an equation,<br>eg $\frac{6x+1.5}{5x+1.5} = \frac{13}{11}$ <b>or</b> $66x + 16.5 = 65x + 19.5$<br><b>or</b> $\frac{6x+1.5}{11x+3} = \frac{13}{24}$ <b>or</b> $144x + 36 = 143x + 39$<br><b>or</b> $\frac{a}{b} = \frac{6}{5}$ <b>and</b> $\frac{a+1.5}{b+1.5} = \frac{13}{11}$<br><br><b>or</b> $5a = 6b$ <b>and</b> $11a + 16.5 = 13b + 19.5$ oe<br><br><b>OR</b> for comparing $12 : 10$ to $13 : 11$ <b>and</b> deducing 1 part = 1.5 |                     |
|                |                | P1   | for isolating in terms of $x$ , eg $66x - 65x = 19.5 - 16.5$<br><b>or</b> $144x - 143x = 39 - 36$ <b>or</b> $x = 3$<br><br><b>or</b> for eliminating $a$ or $b$ , eg $55a = 66b$ <b>and</b> so $66b = 65b + 15$<br><br><b>OR</b> for process to find values for M <b>and</b> K, eg $12 \times 1.5$ <b>and</b> $10 \times 1.5$   |                     |
|                |                | A1   | cao   |                     |

| Paper: 1MA1/3H |        |      |   |                              |
|----------------|--------|------|---|------------------------------|
| Question       | Answer | Mark | Mark scheme   | Additional guidance          |
| 3              | 1.5    | P1   | for process to develop 3 algebraic expressions, eg. (R =) $n$ , (S =) $2n$ , (T =) $2n - 6$ , oe, at least two must be correct.<br><b>or</b> for selecting 3 values satisfying the given criteria, eg. (R =) 10, (S =) 20, (T =) 14 |                              |
| Q28            |        | P1   | for process to sum 3 algebraic expressions and equating to 54, eg. $n + "2n" + "2n - 6" = 54$<br><b>or</b> for finding the correct sum of their values eg. "10" + "20" + "14" = 44  |                              |
|                |        | P1   | for start of process to solve the correct linear equation, eg. $5n = 54 + 6$ ( $n = 12$ )<br><b>or</b> for 12, 24, 18   |                              |
|                |        | P1   | for "12" : $2 \times "12" - 6$ oe eg 12 : 18 oe or 18 : 12 linked to T, R   |                              |
|                |        | A1   | for 1.5 or $\frac{3}{2}$ or $1\frac{1}{2}$  | Accept 1 : 1.5 etc as answer |