| Question |  | Answer |  |  |  | Marks | Part Marks and Guidance |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | (a) | Gold | Silver | Bronze | Total | 3 | B3 for all 5 entries correct; B2 for 3 or 4 entries correct; B1 for 2 entries correct | [Common with Foundation] <br> B0 just one entry correct |
|  |  | 13 | 11 | 9 | 33 |  |  |  |
|  |  | 11 | 5 | 10 | 26 |  |  |  |
|  |  | 10 | 10 | 5 | 25 |  |  |  |
|  |  | 34 | 26 | 24 | 84 |  |  |  |
|  | (b) | 2h 8m 2s |  |  |  | 2 | B1 for 2 elements correct or for 2h 7m 62s |  |


| 2 | (a) | $\begin{array}{lll} -- & 46 & 119 \\ 37 & 44 & -- \\ -- & 90 & -- \end{array}$ | 3 | B2 for 4 correct Or B1 for 2 correct |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | (b) | $\frac{110}{200}$ oe isw | 2 | B1 for $\frac{n}{200}$ or $\frac{110}{n}$ | $\begin{aligned} & \text { In 1(b),(c),7(a),(b),12(b)\&20, }-1 \\ & \text { once for poor notation eg } 0.15 / 1 \end{aligned}$ |
|  | (c) | $\frac{\text { Their } 46}{200}$ oe isw | 1FT |  |  |


| $\mathbf{3}$ | (a) | 64,19 | 1 |  |  |
| :--- | :--- | :--- | :--- | :---: | :--- | :--- |
|  | (b) | 1200 | 1 |  |  |
|  | (c) | 75,25 any order | 1 |  |  |



| 5 | (a) |  | $\begin{aligned} & 59 \& 28 \\ & 63 \& 6 \end{aligned}$ | 2 | B1 for 3 correct |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (b) | (i) | $60 \div 0.05 \text { or } \frac{60}{0.05}$ | 1 |  | Allow 'busstop' method with clear 60 and 0.05 |
|  |  | (ii) | 1200 | 3 | M2 for full correct method <br> or M1 for one correct step <br> If zero scored SC1 for figs 12 as answer nfww | e.g. attempt at long division (60/0.05 or 6000/5) seen that would lead to correct order of magnitude and first step correct <br> e.g. 20 per second, $20 \sim 1,2$ per <br> 0.1 s , their $20 \times 60$, etc <br> 20 or 60/5 alone do not score |


| 6 | (a) |  | 41 | 2 | B1 for (11/4 lb =) 20 (oz) or ( $21 / 4 \mathrm{lb}=$ ) $36(\mathrm{oz})$ or $(1 / 2 \mathrm{lb}=) 8(\mathrm{oz})$ or $7 \frac{1}{4}$ or 116 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (b) | (i) | $31 \frac{1}{4}$ | 2 | M1 for $\frac{5}{4} \times \frac{25}{(1)}$ or $\frac{125}{4}$ oe or $25+25 \times \frac{1}{4}$ or full method for $1.25 \times 25$ with no more than one arithmetic error or 32 nfww | eg $\frac{500}{16}$ earns M1 but $1 \frac{1}{4} \times 25$ only does not score Condone 31.25 for 2 |
|  |  | (ii) | 11 | 2 | M1 for (their 125) $\div 12$ or 10(...) or an embedded answer of 10 or 11 | eg $10 \times 12=120$ or $12 \times 11=132$ Could be through clear counting on |


| 7 | (a) | 12 | 4 | B1 for use of a correct unit change <br> M1 for 2(0) $\times 21$ or 42(0) or figs 67/figs 2 or figs 335,33 <br> M1 for (their 67(0) - their 42(0))/2(0) or their 67(0)/2(0) - 21(0) | Condone 66(0) used <br> ie units must be consistent here so (670-420)/2 scores <br> B1M1M0 <br> Division may be implied eg $11 \times 2=24$ with answer of 11 or by 'counting on' Condone $67(0) \div 2(0)=33.1$, 33.05 etc, similarly $25 \div 2=12.1$ etc |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | (b) | $£ 3.53$ |  | M1 for $20-(3.99+5.49+6.99)$ soi B1 for $£ 16.47$ seen | eg answer of 2.53 following 17.47 scores M1 |


| 8 |  |  | Fully correct and concise solution ( $\square=-2, \square=9$ ). Correct and clear (language and) algebra throughout. <br> Fully correct solution but there might be superfluous work eg finding values of other symbols first or minor errors in spelling, punctuation or grammar or lack of clear algebraic method. <br> Alternatively it may be a fully correct method up to finding the value of one variable, with at most one error, and correct and clear (language and) algebra throughout. <br> Numerical trial and improvement approach leading to 2 correct values or correct equations and some progress made eg correct method such as coefficients of one variable equated allowing for one arithmetic slip. Alternatively they write the two equations (enable the solution to be found) with a clear explanation of how these were obtained eg letters on the diagram, use of symbols in algebra, use of ' $s$ ' and ' $h$ ' or key given. <br> No work of any value | 5 | No need for language providing the algebra is clear and logical and steps explained eg use of a key, $\times 2$ or - signs <br> For lower mark - more progress eg correct method such as elimination of one variable correctly from the 2 simplest equations $(3 s+h=3$ and $2 h+2 s=14)$ allowing for one arithmetic slip at any stage or with $3 / 4$ variables/symbols with elimination of one of these allowing for one arithmetic slip at any stage or correct method leading to only 1 value found correctly. <br> Alternatively they will have the correct equations with some progress made by equating coefficients correctly and clear (language and) algebra throughout. <br> For lower mark - only 1 correct value found by trial and improvement or sufficient equations to solve the problem correctly written with no further progress Alternatively one correct equation with a clear key. <br> The common approach to make judgements on simultaneous equations is: <br> Each term of an equation must change when multiplied to be the correct method, two terms must be correct. When adding or subtracting the two equations to eliminate a variable, the operation must be applied consistently to all terms to be a correct method. |
| :---: | :---: | :---: | :---: | :---: | :---: |


| 9 | (a) |  | 11.6 | 2 | M1 for $3.7+2.1+3.7+2.1$ oe |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (b) |  | $10 x-6$ or $2(5 x-3)$ final answer | 3 | M2 for 2(3x $+2+2 x-5$ ) oe soi OR <br> B1 for $6 x+4$ seen <br> B1 for $4 x-10$ seen <br> After $\mathbf{0}$, allow SC1 for $5 x-3$ seen or for $10 x$ seen in answer |  |
|  | (c) | (i) | 48.69 to 48.71 | 2 | M1 for $\pi \times 15.5$ oe |  |
|  |  | (ii) | $\begin{aligned} & 1.8 \text { or } \frac{9}{5} \text { or } 1 \frac{4}{5} \\ & 1.8[0 \ldots] \text { or } \frac{9}{5} \text { or } 1 \frac{4}{5} \end{aligned}$ | $2$ 1FT | M1 for $27.9 \div 15.5$ or (87.65 to 87.7) $\div$ (48.69 to 48.71) <br> FT their scale factor |  |




| 12 | 3.51 | $\mathbf{2}$ | M1 for 3.509677... rounded or truncated to <br> 1 dp or more <br> or SC1 for 5.73 | 5.73 from $6.26-0.82 \div 1.55$ to 2 dps |
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