June 2010

| 1380/2F |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Question | Working | Answer | Mark | Notes |
| (a) | $4 \times 3$ | 12 | 1 | B1 cao |
|  | $4 \times 2.5$ | 10 | 1 | B1 cao |
|  |  | Two circles | 1 | B1 cao |
|  |  | One and a half circles | 1 | B1 cao |
| 2 (a) |  | 2.80 | 1 | B1 accept 2.80p |
| (b) |  | 2.06 | 1 | B1 accept 2.06p |
| 3 (a)(i) |  | cuboid | 3 | B1 (accept rectangular prism) |
| (ii) |  | sphere |  | B1 (ignore spelling) |
| (iii) |  | pyramid |  | B1 accept tetrahedron, (triangular based) pyramid |
| (b) | $5 \times 2$ | 10 | 1 | B1 cao |


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| :---: | :---: | :---: | :---: | :---: |
| $4$ <br> (i) <br> (ii) |  | $\begin{aligned} & 53 \\ & 10 \end{aligned}$ | 2 | B1 for 53 cao <br> B1 for 10 cao |
| $5$ <br> (a) <br> (b) <br> (c) |  | Certain <br> Even chance <br> Impossible | 1 <br> 1 <br> 1 | B1 accept likely <br> B1 accept evens <br> B1 cao |
| $6$ <br> (a) <br> (b)(i) <br> (ii) |  | Circle drawn with radius 5 cm <br> Arrows on horizontal lines | 1 <br> 2 | B1 for circle with radius $5 \mathrm{~cm} \pm 2 \mathrm{~mm}$ <br> B1 for any clear indication of the pair of parallel lines <br> B1 for any right-angle labelled with an R (inside or outside the angle) Accept a rightangle box sign used instead of R. |


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| :---: | :---: | :---: | :---: | :---: |
| $7$ <br> (i) <br> (ii) <br> (iii) |  | Metres, cm or mm <br> Stones or pounds <br> litres | 3 | B1 for $\mathrm{m}, \mathrm{cm}$ or mm <br> B1 for stones or pounds <br> B1 for litres (accept $\mathrm{m} l$ or cc or $\mathrm{c} l$ or $\mathrm{cm}^{3}$ ) |
| $8$ <br> (a) <br> (b) |  | $\begin{aligned} & 25 \\ & 1.8 \end{aligned}$ | $1$ | $\begin{aligned} & \text { B1 cao } \\ & \text { B1 accept }-1.8 \text { or } \pm 1.8 \text { or } \frac{\mathbf{9}}{\mathbf{5}} \text { or } \mathbf{1} \frac{\mathbf{4}}{\mathbf{5}} \end{aligned}$ |
| 9 (a) <br> (b) | $16+3$ | $19$ <br> Add 3 oe | $1$ | B1 cao <br> B1 for 'add 3', 'increase by 3'or goes up in 3's. |
| (b) <br> (c) |  | $\square$ <br> 5 <br> 3 | $2$ <br> 1 <br> 1 | B2 for fully correct answer accept freehand lines within tolerance of overlay (B1 for each correct line of symmetry drawn [ -1 for each extra line drawn]) [SC: B1 for both diagonals drawn in addition to the correct lines of symmetry] <br> B1 cao <br> B1 cao |


| Question | Working | Answer | Mark | Notes |
| :---: | :---: | :---: | :---: | :---: |
| 11 (a) (i) |  | 18 | 2 | B1 cao |
| (ii) |  | -6 |  | B1 cao |
| (b) |  | -3 | 1 | B1 for -3 (accept 6 am ) |
| (c) |  | 5 | 1 | B1 for 5, -5 or +5 |
|  |  | $\frac{5}{12}$ | 1 | B1 cao |
| (b) |  | $\frac{5}{20} \text { and } \frac{3}{10}$ | 2 | B1 for $\frac{5}{20}$ oe and B1 for $\frac{3}{10}$ oe |
| (c) | $64 \div 4 \times 3$ | 48 | 2 | M1 for $64 \div 4 \times 3$ oe A1 cao |

\begin{tabular}{|c|c|c|c|c|}
\hline Question \& Working \& Answer \& Mark \& Notes \\
\hline \begin{tabular}{l}
13 \\
(a) \\
(b)
\end{tabular} \& \[
2000 \div 85=23.529 \ldots
\]
\[
2000-85 \times 23
\] \& 23 \& 2

2 \& | M1 for $2000 \div 85$ or $20 \div 0.85$ or sight of digits 235 |
| :--- |
| A1 for 23 |
| Alternative |
| M1 for build up method with an attempt to find the cost of at least 21 tulips A1 for 23 |
| SC B1 for 24 with or without working |
| M1 for $20-" 23 " \times 0.85$ or $2000-" 23 " \times 85$ or difference between $£ 20$ and " $23 " \times 85$ p (consistent units need to be used) A1 for 45 p or $£ 0.45$, ft from " 23 " providing the $20 \leq$ " 23 " $<24$ | \\

\hline | 14 |
| :--- |
| (a) |
| (b) | \& \& \[

$$
\begin{array}{cccc}
\hline 6 & \mathbf{1 5} & \mathbf{4} & \mathbf{2 5} \\
\mathbf{5} & 6 & \mathbf{1 4} & 25 \\
11 & \mathbf{2 1} & 18 & 50 \\
& & & \\
& \frac{3}{25} & \text { oe } &
\end{array}
$$
\] \& 3

2 \& | B3 for a fully correct table |
| :--- |
| (B2 for 4 or 5 correct entries) |
| (B1 for 2 or 3 correct entries) |
| B2 for $\frac{3}{25}$ oe |
| (B1 for $\frac{6}{Y}(y<50)$ or $\frac{x}{50}(x \leq 25)$ or $3: 25$ or |
| $6: 50$ or 3 out of 25 or 6 out of 50 ) | \\

\hline
\end{tabular}

| Question |  | Working | Answer | Mark | Notes |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 15 |  |  | 10.8 to 11.0 | 1 | B1 for answer in the range 10.8 to 11.(0) inclusive |
|  | (b) |  | 27 to 28 | 1 | B1 for answer in the range 27 to 28 inclusive |
|  | (c) | $1.15 \times 50$ | 57.50 | 2 | M1 for $1.15 \times 50$ <br> A1 for 57.50 (accept 57.5) |
|  | (d) | $57.5 \div 11$ | 5.23 | 2 | M1 for " 57.5 " $\div$ " 11 " or for correctly using any other conversion factor from the graph or for sight of a conversion factor of between 4.4 and 4.7 <br> A1 for an answer in the range 5 to 5.75 |
| 16 | (a) | $3 \times 5$ | 15 | 1 | B1 cao |
|  | (b) | $2 y=9+4=13$ | 6.5 | 2 | M1 for attempt to add 4 to both sides or $2 y=9+4$ or attempt to divide both sides by 2 or $y-2=4.5$ <br> A1 cao |
| 17 |  | $\begin{gathered} 180+40 \\ \text { or } 360-(180-40) \end{gathered}$ | 220 | 2 | M1 for $180+40$ or $360-"(180-40)$ " A1 cao |


| Question |  | Working | Answer | Mark | Notes |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 18 |  |  | E | 1 | B1 for E (accept 0745 or 0959 ) |
|  | (b) | $\begin{gathered} 0904-0730 \\ \text { or }(30+60+4) \end{gathered}$ | 94 | 2 | M1 for a clear method of finding the duration of the journey between 0904 and 0730 (eg $30+60+4$ ) or sight of 174 or 1.74 or $1: 74$ or 1 hr 74 or 134 or 1.34 or $1: 34$ or 1 hr 34 <br> A1 cao |
|  | (c) |  | C | 1 | B1 for C (accept 0715 or 0848 ) |
| 19 | (a) | $\frac{2}{3.95}$ | 0.5063(29113...) | 2 | B2 for 0.5063 or better [B1 for 0.5 or 0.50 or 0.506 or 0.51 or 3.95 or the fraction $\frac{40}{79}$ seen] |
|  | (b) |  | 0.51 | 1 | B1 ft for 0.51 from their answer to part(a) which is written to two or more decimal places |


| Question | Working | Answer | Mark | Notes |
| :---: | :---: | :---: | :---: | :---: |
| $20$ <br> (a) <br> (b) <br> (c) |  | Info plotted at $(6.1,32)$ <br> positive <br> 6.6 to 7.6 | 1 <br> 2 | B1 for a correct plot $\pm 2 \mathrm{~mm}$ <br> B1 for positive (correlation) <br> M1 for a single straight line segment with positive gradient that could be used as a line of best fit or an indication on the diagram from 40 on the umbrella axis A1 for an answer in the range 6.6 to 7.6 inclusive |
| $21$ <br> (b) | $\begin{gather*} 1.25 \times 620  \tag{a}\\ \\ 50 \div 1.25=40 \\ 42-40 \end{gather*}$ | $775$ $2$ | $2$ <br> 3 | M1 for $1.25 \times 620$ oe <br> A1 cao <br> M1 for $50 \div 1.25=(40)$ oe <br> M1 dep for $42-$ " 40 " or " 40 " -42 <br> A1 cao <br> Alternative <br> M1 for $42 \times 1.25(=52.50)$ oe <br> M1 dep for " 52.50 " - 50 <br> A1 cao <br> A 0 for $€ 2.5(0)$ or $£ 2.5(0)$ without any working <br> SC B2 for -£2 without working |


| Question | Working | Answer | Mark | Notes |
| :---: | :---: | :---: | :---: | :---: |
| (b) |  | $\begin{equation*} -2,4,7 \tag{a} \end{equation*}$ <br> Straight line from ( -2 , $-2)$ to $(2,10)$ | 2 2 | B2 for a fully correct table <br> (B1 for 1 or 2 correct entries) <br> B2 for a correct straight line from $(-2,-2)$ to $(2,10)$ <br> (B1 ft for at least 4 correctly plotted points OR a single straight line passing through $(0,4)$ OR for a single line of gradient 3 ) |
| 23 (a) (i) <br> (ii) <br> (b) (i) <br> (ii) | 360-130-90 | 140 <br> Angles at a point $=360^{\circ}$ <br> oe <br> 112 | 3 | M1 for 360-130-90 oe <br> A1 cao <br> B1 for 'angles at a point $=360$ ' or 'angles in a complete turn $=360^{\circ}$ oe <br> B1 cao <br> B1 for 'alternate angles' or Z angles or 'corresponding angles' or F angles or B1 for '(angles on a straight) line $=180$ ' <br> Alternative <br> B1 for allied angles or co-interior angles B1 for (vertically) opposite angles |


| Question | Working | Answer | Mark | Notes |
| :---: | :---: | :---: | :---: | :---: |
| 24 | $\begin{gathered} x=1 \text { gives } 11 \\ x=2 \text { gives 28 } \\ x=1.5, \text { gives 18.(3.. ) } \\ x=1.6 \text {, gives 20.(0.. ) } \\ x=1.7, \text { gives 21.(9.. ) } \\ x=1.8 \text {, gives 23.(8..) } \\ x=1.9 \text {, gives 25.(8..) } \\ x=1.85, \text { gives } 24.8(3 . .) \\ x=1.86, \text { gives } 25 .(03 .) \\ x=1.87, \text { gives } 25.2(3 . .) \\ x=1.88, \text { gives } 25.4(4 . .) \\ x=1.89, \text { gives } 25.6(5 . .) \end{gathered}$ | 1.9 | 4 | B2 for a trial between $1.8 \leq x \leq 1.9$ inclusive evaluated <br> (B1 for a trial $1 \leq x \leq 2$ evaluated) <br> B1 for a different trial $1.85 \leq x<1.9$ evaluated <br> B1 (dep on at least one previous B1) for 1.9 Accept trials correct to the nearest whole number (rounded or truncated) if the value of $x$ is to 1 dp but to 1 dp (rounded or truncated) if the value of $x$ is to 2 dp <br> NB: no working scores, no marks even if answer is correct. |
| $25$ <br> (a) <br> (b) | $1-(0.15+0.30+0.35)$ $0.30 \times 500$ | $\begin{aligned} & 0.20 \\ & 150 \end{aligned}$ | $2$ $2$ | M1 for $1-(0.15+0.30+0.35)$ <br> A1 for 0.2 oe <br> M1 for $0.30 \times 500$ <br> A1 cao <br> Note:- $\frac{150}{500}$ gets M1 A0 and 150 out of 500 gets M1 A1 |


| Question | Working | Answer | Mark | Notes |
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| $26$ <br> (a) <br> (b) | $2 x=40$ | Base angles of an isosceles triangle are equal $20$ | 2 | B1 mentions isosceles triangle or two sides the same or base angles equal accept equivalent reasons do not accept incorrect statements <br> M1 for an attempt to move $x$ to LHS or -10 to RHS e.g.: $-x$ each side or +10 each side or to move $3 x$ or +30 or sight of $2 x$ or 40 or $-2 x \text { or }-40$ <br> A1 cao |
| $27$ <br> (b) | $\begin{gather*} 0.5 \times 6 \times 14  \tag{a}\\ \sqrt{6^{2}+14^{2}}=\sqrt{232} \end{gather*}$ | $\begin{gathered} 42 \\ \\ 15.23 \end{gathered}$ | 2 3 | M1 for $0.5 \times 6 \times 14$ oe A1 cao <br> M1 for $6^{2}+14^{2}$ or $36+196$ or 232 <br> M1 for $\sqrt{36+196}$ or $\sqrt{232}$ <br> A1 for answer in range 15.2 to 15.3 |

