## Matter - Nov 2009 paper Mark Scheme

| Question <br> Number | Acceptable Answers | Extra Information | Mark |
| :--- | :--- | :--- | :---: |
| 2 (a)(i) | 1 |  | $\mathbf{1}$ |
| 2 (a)(ii) | other readings will be less than the mass in <br> air |  | $\mathbf{1}$ |
| 2 (a)(iii) | 68 |  | $\mathbf{1}$ |
| 2 (b)(i) | 1 and 2 |  | $\mathbf{1}$ |
| 2 (b)(ii) | object needs to be fully immersed |  | $\mathbf{1}$ |
| 2 (b)(iii) | $85-73$ <br> $=12$ | $\mathbf{1}$ |  |


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| :--- | :--- | :--- | :---: |
| $\mathbf{2 ( c ) ( i ) ~}$ | $\frac{68 / 12}{=5.7}$ or 5.67 or 5.666 etc | $68 / 6=11.3$ | $\mathbf{1}$ |
|  | 2 or 3 s.f. | $68 / 4=17.0$ | $\mathbf{1}$ |
|  | allowed as ecf | $\mathbf{1}$ |  |
| 2 (c)(ii) | relate to raw data |  | $\mathbf{1}$ |


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| :--- | :--- | :--- | :---: |
| $\mathbf{2 ~ ( d ) ~}$ | too full / reads $96\left(\mathrm{~cm}^{3}\right)$ <br> immersed object would take reading above <br> 100 where there are no markings/water <br> overflows | scores both marks | $\mathbf{2}$ |


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| :--- | :--- | :--- | :---: |
| $\mathbf{2 ( e ) ( i )}$ | measure I b w |  | $\mathbf{1}$ |
|  | Ixbxw |  | $\mathbf{1}$ |


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| :--- | :--- | :--- | :---: |
| $\mathbf{2 ( e ) ( i i ) ~}$ | rule |  | $\mathbf{1}$ |

## Matter June 2010 Mark Schemes

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| :--- | :--- | :--- | :--- |
| 2(a)(i) | measuring cylinder <br> graduated cylinder | aps <br> dna <br> cylinder <br> measuring tube <br> beaker <br> measuring beaker |  |
|  |  | (1) |  |


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| :--- | :--- | :--- | :--- |
| 2(a)(ii) | $38\left(\mathrm{~cm}^{3}\right)$ | dna 39 |  |
|  |  |  | (1) |


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| :--- | :--- | :--- | :--- |
| 2(a)(iii) | $56(\mathrm{~g})$ | dna 05656.056 .00 |  |
|  |  |  | (1) |


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| :--- | :--- | :--- | :--- |
| 2(b)(i) | straight line between both points | must use ruler/straight <br> edge <br> dop <br> must be intercept of <br> graph | 1 |
| 2(g) | ignore size of triangle | 1 |  |
| 2(b)(ii) | y-step <br> $x$ step <br> $=0.8\left(\mathrm{~g} / \mathrm{cm}^{3}\right)$ | exception <br> $3 / 4=0.75$ | 1 |
|  |  |  | 1 |

## Matter June 2010 Mark Schemes

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| :---: | :---: | :---: | :---: |
| 2(b)(iii) | any three (1) each <br> 1. can plot more points <br> 2. can draw line of best fit/straight line rather than curve <br> 3. reason why two points is unsatisfactory <br> 4. extends the range <br> 5. increases reliability <br> 6. identifies anomalous results <br> 7. repeat or ignore anomalies <br> 8. can see if density remains constant | ignore <br> more accurate can take average ensures no anomalies |  |
|  |  |  | (3) |

