Notes for Marking of Scripts

Types of Marks

- **M** (ethod) marks are awarded for knowing a correct method of solution and attempting to apply it. Method marks cannot be lost for arithmetic mistakes. They can only be awarded if the method used would have led to the correct answer had not an arithmetic mistake been made. In general a correct method is implied by a correct answer and therefore **when a correct answer is given and no work is shown, no method marks are lost.**

- **A** (ccuracy) marks are given for correct answer only (c.a.o.) Incorrect answers, even though nearly correct, score no marks. Accuracy marks are also awarded for incorrect answers which are correctly followed through (f.t.) from an incorrect previous answer, **provided that f.t. is indicated in the marking scheme.** No method (M) or accuracy (A) marks are awarded when a wrong method leads to a correct answer.

- **B** marks are accuracy marks awarded for specific results or statements independent of the method used.

Misreading

M marks can still be earned (unless that part of the question is trivialized) but the final A marks are lost.

Crossed out working

An answer or working that is crossed out and not replaced is marked as if it was not crossed out. If the answer or working is replaced, then the crossed out answer or working is ignored and should not be considered for marking.

Units

In general, missing or inaccurate units are not penalised unless otherwise indicated in the marking scheme.

Other

- Incorrect working or statement following a correct answer is ignored.
- Marks are not sub-divisible; no half marks may be awarded.
- Other abbreviations used:
  - o.e. (or equivalent)
  - e.e.o.o. (each error or omission)
- Markers are advised to indicate the M, A or B marks awarded in the body of the script and then write their total in the margin. The total mark for each question should be written in the table included at the top of page 1 of the main paper. This measure facilitates the moderation of papers.
## Non Calculator Paper (25 marks)

<table>
<thead>
<tr>
<th>No.</th>
<th>Answers</th>
<th>Marks</th>
<th>Total</th>
</tr>
</thead>
</table>
| 1   | a) Addition done first  

\[
\frac{14}{7} = 2
\]

b) Common denominator seen or implied  

\[
\frac{8 + 9}{12} = \frac{17}{12} \text{ or } 1\frac{5}{12} \text{ (accept both)}
\] | M1 | A1 | 4 |
| 2   | Choosing D (77) by elimination or by any other correct method | M1A1 | 2 |
| 3   | 75% o.e. seen or implied  

75% × €48  

= €36 o.e. Accept other correct methods | M1 | M1 | 3 |
| 4   | 360º seen or implied  

Total of 3 angles = 296º  

\[p = 64\] | M1 | M1 | 3 |
| 5   | a) Correct change of units 450 cm : 300 cm  

Simplifying 3 : 2  

b) 5 shares = €20  

Amy gets 1 share more = €4 | M1 | A1 | 4 |
| 6   | Correct substitution \( t = 5 \times 8 + 7(-3) \)  

\[= 40 - 21 = 19\] | M1 | A1 | 2 |
| 7   | 20 and 60 minutes seen or implied  

\[
\frac{20}{60} = \frac{1}{3}
\] | M1 | A1 | 2 |
| 8   | a) 64  

b) \( \sqrt{64} \) seen or implied, 8  

c) \( V = 8 \times 8 \times 8 = 512 \) | B1 | M1A1 | 5 |
## Main Paper (75 marks)

<table>
<thead>
<tr>
<th>No.</th>
<th>Answers</th>
<th>Marks</th>
<th>Total</th>
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</table>
| 1   | a) Converting units \(400 \text{l} = 400000 \text{ ml}\)  
    400000 \(\div\) 250 = 1600 bottles  
    b) \(\frac{1600}{8} \times 3 = \€600\)  
    c) 1600 \(\times\) 0.5 = \€800 | M1  
    A1  
    M1A1 f.t.  
    M1A1 | 6 |
| 2   | a) Post Office  
    b) North  
    c) \(180^\circ + 45^\circ = 225^\circ\) | B1  
    B1  
    M1A1 | 4 |
| 3   | a) pentagon  
    b) \(360^\circ \div 5 = 72^\circ\)  
    c) isosceles  
    d) \(180^\circ - 72^\circ = 108^\circ\)  
     \(108^\circ \div 2 = 54^\circ\)  
    e) each int. angle = \(54^\circ \times 2 = 108^\circ\)  
    f) sum of angles = \(108^\circ \times 5 = 540^\circ\) | B1  
    M1A1  
    B1  
    M1  
    M1A1 f.t.  
    M1A1 f.t. | 11 |
| 4   | a) 1, 5, 9, 13  
    b) 17, 21  
    c) 4 | B1 for every 2 correct  
    B1B1  
    B1 | 5 |
| 5   | a) \(-3, 1, 7\)  
    b) Correct axes, plotting and drawing graph correctly  
    c) (0, 1)  
    d) \(x = 2.5\) | B2 all correct (B1 if two are correct)  
    B1B1  
    B1 both correct  
    M1A1 | 7 |
| 6   | a) Correct grouping, \(2x - 3\)  
    b) \(56a - 49\)  
    c) \(5q = 25, q = 5\) | M1A1  
    B1  
    M1A1 | 5 |
| 7   | a) \(M = (1,2) \text{ } N = (5,2)\)  
    b) \((3,5)\)  
    c) Any other correct point | B1B1  
    B1  
    B1 | 4 |
The Rockets 30% of 400 = 120
Chilling 45% of 400 = 180
Red Hot Peppers 25% of 400 = 100
Bars drawn to the correct height

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<tbody>
<tr>
<td>a) Area of plot = 45 m²</td>
<td>b) Area of flower bed = ( \pi r^2 ) seen or implied</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>( \pi \times 1.5^2 = 7.06858\ldots )</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>= 7.07 m²</td>
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<tr>
<td>c) Area of lawn = 45 – 7.06858 = 37.93142\ldots</td>
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<td></td>
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<tr>
<td></td>
<td></td>
<td>= 37.93 m²</td>
<td></td>
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<tr>
<td>d) Circum. = 2( \pi r ) seen or implied</td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>= 2( \pi \times 1.5 = 9.42477\ldots )</td>
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<tr>
<td></td>
<td></td>
<td>= 9.42 m</td>
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Correct large arc
Correct small arc
Correct line through A and pt. of intersection of arcs

<p>| | | |</p>
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<tr>
<td>a)</td>
<td>b) 9</td>
<td></td>
</tr>
<tr>
<td>c) ( \frac{3}{9} ) or ( \frac{1}{3} )</td>
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Correct common factor 5
5\((a + 2b - 3c)\)
b) \( P - 2b = 2a \)
\( a = \frac{P - 2b}{2} \) o.e.
| 13 | **a)**  
|    | (i) 110 kg  
|    | (ii) \((96 \pm 0.5)\) kg  
|    | **b)** May and June  
|    | **c)** \(130 - 95 = 35\) kg  
|    | **B1**  
|    | **B2**  
|    | **B1B1**  
|    | **M1A1**  
|    | 7 |