# basic education

Department:
Basic Education
**REPUBLIC OF SOUTH AFRICA**

## NATIONAL
## SENIOR CERTIFICATE

## GRADE 12

### MATHEMATICAL LITERACY P1

### NOVEMBER 2011

### MEMORANDUM

**MARKS: 150**

| Symbol | Explanation |
|--------|-------------|
| M | Method |
| M/A | Method with accuracy |
| CA | Consistent accuracy |
| A | Accuracy |
| C | Conversion |
| S | Simplification |
| RT/RG | Reading from a table/Reading from a graph |
| SF | Correct substitution in a formula |
| O | Opinion/Example |
| P | Penalty, e.g. for no units, incorrect rounding off etc. |
| R | Rounding off |

**This memorandum consists of 15 pages**

**QUESTION 1 [34 MARKS]**

| Ques | Solution | Explanation | AS |
|------|----------|-------------|-----|
| 1.1.1 | $241,50(124,37 - 121,79) + \sqrt{232,5625}$ <br><br> $= 623,07 + 15,25$   ✓A <br><br> $= 638,32$ ✓CA | 1A simplifying both terms <br><br> 1CA simplification <br> **Answer only full marks** <br> (2) | 12.1.1 |
| 1.1.2 | $25,5 \div 100$ ✓M <br><br> $= 0,255$ m   ✓A | 1M dividing by 100 <br><br> 1A simplification <br> **Answer only full marks** <br><br> (If 0,26 penalize 1 mark) <br> (2) | 12.3.2 |
| 1.1.3 | $2\frac{1}{2} \times 12$ ✓M <br><br> $= 30$ eggs   ✓CA <br><br> **OR** <br><br> $12 + 12 + 6$ ✓M <br><br> $= 30$ eggs ✓CA | 1M concept of dozen <br><br> 1CA simplification <br><br><br><br> **Answer only full marks** <br> (2) | 12.1.2 |
| 1.1.4 | 01:04 ✓✓A        **OR** 1:04 am <br><br> **OR** 4 min after 1 in the morning. | 2A answer <br><br> (2) | 12.3.2 |
| 1.1.5 |       ✓M <br> 36 m $\div$ 4 $=$ 9 m   ✓A | 1M dividing <br> 1A answer <br><br> **Answer only full marks** <br> (2) | 12.3.1 |
| 1.1.6 | 1 **OR** 100% **OR** certain **OR** definite ✓✓A | 2A answer <br> (2) | 12.4.5 |

| Ques | Solution | Explanation | AS |
|---|---|---|---|
| 1.2.1 | $20 \times 0,95$ ✓M<br><br>= 19 Botswana pula (BWP) ✓A<br><br>**OR**<br><br>1 Botswana pula (BWP) = $\dfrac{1}{0,95}$ ZAR<br>$\qquad\qquad\qquad = 1,0526316$ ZAR ✓M<br><br>R20 = $\dfrac{20}{1,0526316}$ BWP<br><br>$\quad = 19$ BWP ✓A<br><br>**OR**<br><br>$2 \times 20 \times 0,95$ ✓M<br><br>= 38 Botswana pula (BWP) ✓A | 1M multiplying<br><br>1A simplification<br><hr>**Answer only full marks**<hr>Penalty of 1 mark if answer is in rand.<br><br>1M dividing<br><br><br>1A simplification<br><br><br><br><br>1M multiplying<br><br>1A simplification<br><div align="right">(2)</div> | 12.1.3 |
| 1.2.2 | Total amount due<br>$\qquad\qquad\qquad\quad$ ✓M/A<br>= $(10 \times 360\ 286$ ZMK$)$ + $(8 \times 85\ 134$ ZMK$)$<br>$\quad -\ 1\ 021\ 605$ ZMK<br>$\qquad\qquad\qquad$ ✓CA<br>= $(3\ 602\ 860 + 681\ 072 - 1\ 021\ 605)$ ZMK<br><br>= 3 262 327 ZMK ✓CA | 1M /A substitution<br><br><br><br>1CA multiplication<br><br><br>1CA simplification<br><hr>**Answer only full marks**<hr>No penalty if answer is given with comma separators for thousands<br><div align="right">(3)</div> | 12.2.1 |
| 1.2.3 | Speed = $\dfrac{180\,\text{km}}{2,25\,\text{h}}$ ✓SF ✓C **OR** $\dfrac{180\,\text{km}}{2\frac{1}{4}\,\text{h}}$ **OR** $\dfrac{180\,\text{km}}{2\,\text{h}\ 15\,\text{min}}$<br><br>$\quad = 80$ km/h ✓CA<br><br>**OR**<br><br>Speed = $\dfrac{180\,\text{km}}{135\,\text{min}}$ ✓SF<br><br>$\quad = 1,33$ km/min $\times\ 60$ min/h ✓C<br><br>$\quad = 80$ km/h ✓CA | 1SF substitution<br>1C conversion to hours<br>1CA simplification<br><hr>**Answer only full marks**<hr>1SF substitution<br><br>1C conversion to hours<br><br>1CA simplification<br><div align="right">(3)</div> | 12.2.1 |

| Ques | Solution | Explanation | AS |
|------|----------|-------------|-----|
| 1.3.1 (a) | 500 000 000 – 106 000 000 ✓M<br><br>= 394 000 000 ✓A<br><br>**OR**<br><br>500 million – 106 million ✓M<br>✓A<br>= 394 million | 1M subtracting<br>1A simplification<br>**Answer only full marks**<br><br>Penalty 1 mark if answer negative.<br><br>(2) | 12.1.1 |
| 1.3.1 (b) | 106 000 000 – 50 880 000 ✓M<br><br>= 55 120 000 ✓A<br><br>**OR**<br><br>106 million – 50,88 million ✓M<br><br>= 55,12 million ✓A | 1M subtracting (one value must be correct)<br>1A simplification<br>**Answer only full marks**<br><br>(2) | 12.1.1 |
| 1.3.1 (c) | $\dfrac{230\ 000\ 000}{500\ 000\ 000}\times100\%$ ✓A ✓M  **OR**  $\dfrac{230\text{ million}}{500\text{ million}}\times100\%$ ✓A ✓M<br><br>= 46 % ✓CA    = 46 % ✓CA | 1M concept<br>1A correct values<br><br>1CA simplification<br>(3) | 12.1.1 |
| 1.3.2 (a) | Cellphone **OR** laptop **OR** iPad **OR** tablet **OR** GPS-device ✓A | 1A answer<br>(accept brand names )<br>(1) | 12.4.4 |
| 1.3.2 (b) | 30 % ✓RG | 1RG answer<br>(1) | 12.4.4 |
| 1.3.2 (c) | 100 % – 12 % ✓M<br><br>= 88 % ✓A | 1M subtraction from 100%<br>1A simplification<br>**Answer only full marks**<br>(2) | 12.4.4 |
| 1.3.2 (d) | ✓RG<br>27 % × 106 million ✓M<br><br>= 28 620 000 **OR** 28,62 million ✓CA | 1RG correct values<br>1M concept of percentage<br><br>1CA simplification<br>**Answer only full marks**<br>(3) | 12.4.4<br>12.1.1 |
| | | | **[34]** |

## QUESTION 2 [28 MARKS]

| Ques | Solution | Explanation | AS |
|---|---|---|---|
| 2.1.1 | 27 °C   ✓RG | 1RG answer<br>No penalty for omitting unit<br><div align="right">(1)</div> | 12.4.4 |
| 2.1.2 | Harare ✓✓RG     **OR**    New Delhi ✓✓RG | 2RG answer<br>(maximum 1 mark if two cities given and one is wrong)<br><div align="right">(2)</div> | 12.4.4 |
| 2.1.3 | Amsterdam✓RG | 1RG answer<br><div align="right">(1)</div> | 12.4.4 |
| 2.1.4 | Harare ✓✓RG | 2RG answer<br><div align="right">(2)</div> | 12.4.4 |
| 2.1.5 | 8 °C – (–2 °C)✓M/A<br><br>= 10 °C  ✓CA<br><br><div align="center">**OR**</div><br><div align="center">✓M/A</div>Start at (–2 °C) and count until 8 °C<br>∴ Range = 10 °C  ✓CA | 1M/A concept of range<br><br>1CA simplification<br><br>**Answer only full marks**<br><br><div align="right">(2)</div> | 12.4.3 |
| 2.1.6 | <div align="center">✓SF</div>Temperature in °F = 1,8 × 13° + 32°<br><br><div align="center">= 55,4°  ✓CA</div> | 1SF substitution of **13°**<br><br>1CA simplification<br>**Answer only full marks**<br><div align="right">(2)</div> | 12.3.2 |
| 2.2.1 | Northern Cape ✓RG | 1RG answer<br><div align="right">(1)</div> | 12.4.4 |
| 2.2.2 | <div align="center">✓RG</div>Free State and Western Cape ✓RG | 2RG answer<br><div align="right">(2)</div> | 12.4.4 |
| 2.2.3 | <div align="center">✓✓RG</div>Mpumalanga    **OR**    Western Cape  ✓✓RG | 2RG answer<br>(penalty of 1 if one province is wrong)<br><div align="right">(2)</div> | 12.4.4 |
| 2.2.4 | <div align="center">✓M</div>100 % – (6,5 + 29,7 + 9,5 + 10,6 +13,9 + 10,6 + 1,4 + 7,6) %<br><br>= 10,2 % ✓A | 1M concept<br><br>1A simplification<br>**Answer only full marks**<br><div align="right">(2)</div> | 12.4.4 |

| Ques | Solution | Explanation | AS |
|---|---|---|---|
| 2.2.5 | $\dfrac{3\ 249\ 415}{6,5\%}$ ✓M ✓RG <br><br> $= \dfrac{3\ 249\ 415}{0,065}$   **OR**   $\dfrac{3\ 249\ 415}{6,5} \times \dfrac{100}{1}$ <br><br> $= 49\ 991\ 000$ ✓CA <br><br> **OR** <br><br> 6,5% of the population = 3 249 415   ✓RG <br><br> 1% of the population = 499 910   ✓M <br><br> 100% of the population = 49 991 000   ✓CA | 1M concept <br> 1RG correct percentage <br><br><br> 1CA simplification <br><br> (maximum 2 marks if they use land area percentage) <br> Penalty 1 mark if answer is not a whole number <br> **Answer only full marks** <br><br>(3) | 12.1.1 <br> 12.4.4 |
| 2.3.1 | 1 hour ✓✓RG | 2RG answer <br> (accept 1:00 or 01:00) <br><br>(2) | 12.2.3 |
| 2.3.2 |                      ✓✓RG <br> Accept any value more than 3 hours and up to 4 hours <br><br> **OR** <br><br> 3 < hours ≤ 4   **OR**   (3 ; 4] | 2RG answer <br><br><br><br>(2) | 12.2.3 |
| 2.3.3 | R20,00 ✓✓RG | 2RG answer <br><br>(2) | 12.2.3 |
| 2.3.4 | R7,00 ✓ ✓RG | 2RG answer <br><br>(2) | 12.3.2 |
|  |  |  | **[28]** |

**QUESTION 3 [23 MARKS]**

| Ques | Solution | Explanation | AS |
|------|----------|-------------|-----|
| 3.1.1 | $\checkmark$M<br>**A** = R400 – R210 = R190   $\checkmark$A<br><br>$\checkmark$M<br>**B** = R25,00 ×30 = R750  $\checkmark$CA<br><br><br>$\checkmark$M<br>**C** = 4 × R110 = R440  $\checkmark$A<br><br><br>$\checkmark$M<br>**D** = 4 × R125 = R500   $\checkmark$A | 1M subtracting<br>1A simplification<br><br>1M multiplying<br>1CA simplification<br>(maximum 1 mark if not using 30 days)<br><br>1M multiplying<br>1A simplification<br><br>1M multiplying<br>1A simplification<br><br>**Answer only full marks**<br><br>(8) | 12.1.3 |
| 3.1.2 | $\checkmark$M<br>R2 500 − R2 330<br><br>= R170  $\checkmark$CA | 1M subtracting<br>1CA simplification<br>(no penalty if answer is negative)<br><br>(2) | 12.1.3 |
| 3.1.3 | $\checkmark\checkmark$A<br>Use at least one of her weekend entertainment money allowances<br><br>**OR**<br><br>$\checkmark\checkmark$A<br>Reduce food expenses to save R30.<br><br>**OR**<br><br>(any other suitable answer) | 2A answer<br><br><br><br><br><br>(2) | 12.1.2 |

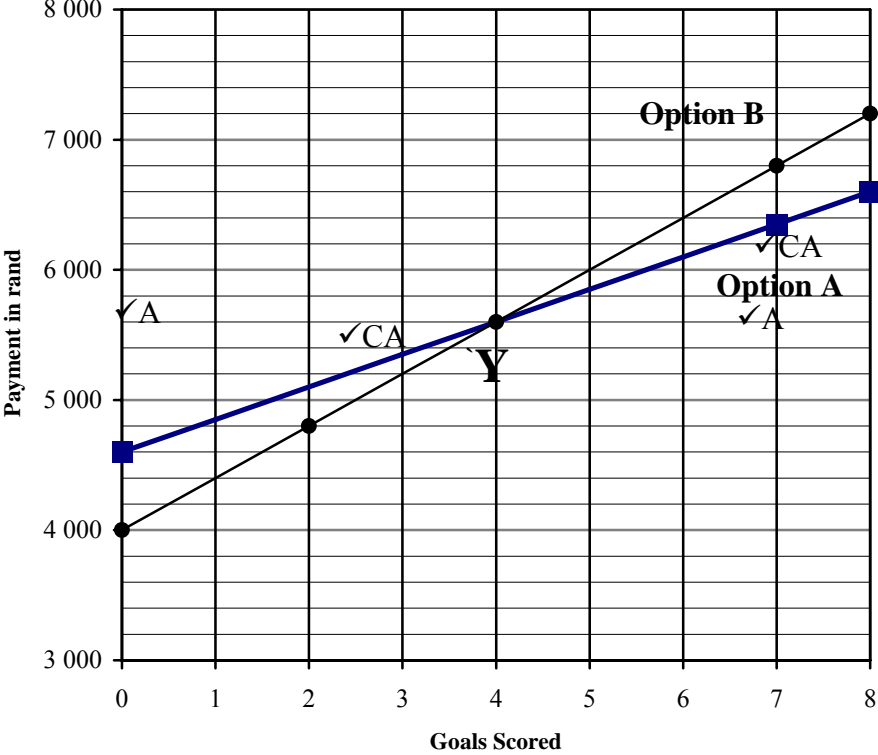| Ques | Solution | Explanation | AS |
|---|---|---|---|
| 3.2 | $A = P(1+i)^n,$ $\checkmark A$ <br> $= R125\left(1+\dfrac{8}{100}\right)^3 \checkmark M$   **OR**   $R125\left(1+0{,}08\right)^3$ <br><br> $= R157{,}464$ <br><br> $\approx R157{,}46$ $\checkmark CA$ <br><br> **OR** <br><br> For a year: $R125 \times 52 = R6\,500$ <br> $A = P(1+i)^n,$   $\checkmark A$ <br> $= R6\,500\left(1+\dfrac{8}{100}\right)^3 \checkmark M$ <br><br> $= R8\,188{,}23$ per annum <br><br> $= R157{,}464$ per week <br><br> $\approx R157{,}46$ $\checkmark CA$ | 1M substitution <br> 1A correct value of n <br><br><br> 1CA simplification <br><br><br><br><br><br><br> 1M substitution <br> 1A correct value of n <br><br><br><br><br> 1CA simplification <br>                       (3) | 12.1.3 |
| 3.3.1 | $\checkmark A$ <br> Row 5 column 2 $\checkmark A$ | 1A row <br> 1A column <br>                       (2) | 12.3.4 |
| 3.3.2 | $3$ $\checkmark CA$    **OR**   $4$ $\checkmark CA$ | 1CA answer <br>                       (1) | 12.3.4 |
| 3.3.3 | $\checkmark\checkmark A$ <br> South-east **OR** North-west **OR** South-west **OR** North-east <br><br> **OR** To the right at the back **OR** To the left in front | 2A answer <br><br><br>                       (2) | 12.3.4 |
| 3.3.4 | $\checkmark A$ <br> Total area $= 32 \times 0{,}75$ m$^2$ $\checkmark M$ <br><br> $= 24$ m$^2$ $\checkmark CA$ | 1A using correct values <br> 1M multiplying by whole number <br> 1CA simplification from multiplication <br>                       (3) | 12.3.1 <br> 12.1.1 |
| | | | **[23]** |

**QUESTION 4 [16 MARKS]**

| Ques | Solution | Explanation | AS |
|---|---|---|---|
| 4.1.1 | 6 ✓✓A | 2A answer <br><br> (2) | 12.4.3 |
| 4.1.2 | $6\frac{1}{2}$ ✓✓A | 2A answer <br><br> (2) | 12.4.3 |
| 4.1.3 | $5\frac{1}{2}$ ✓✓A    **OR**    $\dfrac{5\frac{1}{2} + 5\frac{1}{2}}{2} = 5\frac{1}{2}$ ✓✓A | 1A for identifying the $5\frac{1}{2}$ & $5\frac{1}{2}$ as the middle values <br> 1A answer <br> **Answer only full marks** <br><br> (2) | 12.4.3 |
| 4.1.4 | $3\frac{1}{2}$, 4, $4\frac{1}{2}$; $5\frac{1}{2}$ ✓✓A  (accept answers less than 5 or answers greater than 11 or any size not in boys data) | 1A for every 2 correct sizes <br> 1A for every 2 correct sizes <br><br> (2) | 12.4.3 |
| 4.1.5 | 14 : 15 ✓A ✓A ✓M | 1M writing as a ratio <br> 1A value for boys <br> 1A value for girls <br><br> (3) | 12.4.3 <br> 12.1.1 |
| 4.2.1 | Volume = length × breadth × height ✓M <br><br> = 27,5 cm × 15 cm × 11,9 cm <br><br> = 4 908,75 cm³ ✓A✓A | 1M substitution <br> 1A simplification <br> 1A correct unit <br> **Answer only full marks** <br><br> (3) | 12.3.1 |
| 4.2.2 | Number of boxes = $\dfrac{118\,\text{cm}}{11,9\,\text{cm}}$ ✓M <br><br> = 9,915 <br><br> = 9 ✓CA | 1M division by 11,9 cm only <br><br><br> 1CA maximum <br> **Answer only full marks** <br><br> (2) | 12.1.1 <br> 12.1.2 |
| | | | [16] |

**QUESTION 5 [25 MARKS]**     **(One penalty for incorrect rounding in this question only)**

| Ques | Solution | Explanation | AS |
|---|---|---|---|
| 5.1.1 | Volume $= 3{,}14 \times (18{,}5 \text{ mm})^2 \times 10 \text{ mm}$    $\checkmark$M<br><br>$= 10\,746{,}65 \text{ mm}^3$ $\checkmark$A $\checkmark$A<br>**(using $\pi$ : V = 10 752,10 mm$^3$)** | 1M substitution<br>1A simplification<br>1A unit<br>**Answer only full marks**<br><br>Penalize only once in 5.1.1 or 5.1.2 for unit<br><br>(3) | 12.3.1 |
| 5.1.2 | Volume $= \dfrac{1}{2} \times 50 \text{ mm} \times 43{,}3 \text{ mm} \times 10 \text{ mm}$   $\checkmark$M<br><br>$= 10\,825 \text{ mm}^3$ $\checkmark$A $\checkmark$A | 1M substitution<br><br>1A simplification<br>1A unit<br>**Answer only full marks**<br>(3) | 12.3.1 |
| 5.1.3 | Total surface area of cylinder<br><br>$= 2 \times 3{,}14 \times 18{,}5 \text{ mm} \times (18{,}5 \text{ mm} + 10 \text{ mm})$ $\checkmark$SF<br>$\checkmark$A<br>$= 2 \times 3{,}14 \times 18{,}5 \text{ mm} \times 28{,}5 \text{ mm}$<br>$\checkmark$CA<br>$= 3\,311{,}13 \text{ mm}^2$ $\checkmark$A<br>**(using $\pi$ : TSA = 3 312,81 mm$^2$)** | 1SF substitution<br><br>1A addition<br><br>1CA simplification<br>1A unit<br>**Answer only full marks**<br>(4) | 12.3.1 |
| 5.1.4 | Total surface area of triangular prism<br>                       $\checkmark$SF<br>$= (50 \text{ mm} \times 43{,}3 \text{ mm}) + 3(50 \text{ mm} \times 10 \text{ mm})$<br><br>$= 2\,165 \text{ mm}^2 + 1\,500 \text{ mm}^2$ $\checkmark$A<br><br>$= 3\,665 \text{ mm}^2$ $\checkmark$CA | 1SF substitution<br><br>1A multiplication<br><br>1CA simplification<br>**Answer only full marks**<br>(3) | 12.3.1 |

| Ques | Solution | Explanation | AS |
|---|---|---|---|
| 5.2.1 | 1 sheet of gold foil wraps 12 chocolates $\checkmark$M<br><br>10 sheets wraps 120 chocolates $\checkmark$A<br><br>$\checkmark$M | 1M concept<br><br>1A simplification<br><br>**Answer only full marks**<br>(2) | 12.2.1 |
| 5.2.2 | Number of round chocolates $= 6 \times (5 + 7)$ $\checkmark$SF<br>$= 72$    $\checkmark$CA | 1 M using correct formula<br>1 SF substitution<br><br>1CA simplification<br>**Answer only full marks**<br>(3) | 12.2.1 |
| 5.2.3 | $\checkmark$M $\checkmark$SF<br>Number of triangular chocolates $= 4 \times (5 + 7) + (12 \times 10)$<br>$= 168$    $\checkmark$CA | 1M using correct formula<br>1 SF substitution<br><br>1CA simplification<br>**Answer only full marks**<br>(3) | 12.2.1 |
| 5.3.1 | $\dfrac{13}{50}$ $\checkmark$A $\checkmark$A    **OR**      0,26     **OR**    26 % | 1A numerator<br>1A denominator<br>(2) | 12.4.5 |
| 5.3.2 | $\dfrac{0}{50}$ $\checkmark\checkmark$A   **OR**   0   **OR**   0 %   **OR**   impossible   **OR**   none | 2A answer<br><br>(2) | 12.4.5 |
| | | | **[25]** |

**QUESTION 6 [24 MARKS]**

| Ques | Solution | Explanation | AS |
|---|---|---|---|
| 6.1.1 | **P** = R4 600 + (R250 × 2) ✓SF <br><br> = R5 100 ✓A <br>            ✓SF                                ✓SF <br> R6 100 = R4 600 + (R250 ×Q)   **OR**   R6 400 = R4 000 + (R400 × Q) <br><br> 250 × Q = 1 500                 400 × Q = 2 400 <br><br>     **Q** = 6 ✓A                       **Q** = 6 ✓A | 1SF substitution <br><br> 1A answer <br><br> 1SF substitution <br><br><br><br> 1A simplification <br> **Answer only full marks** <br>             (4) | 12.2.1 |
| 6.1.2 (a) | R4 000 ✓RT | 1 RT answer <br>       (1) | 12.2.3 |
| 6.1.2 (b) | 7 ✓✓RT | 2RT answer <br>       (2) | 12.2.3 |
| 6.1.2 (c) | The team members would earn more money from Option B ✓A✓A | 2 A answer <br>       (2) | 12.2.3 |

| Ques | Solution | | | | | | | Explanation | AS |
|---|---|---|---|---|---|---|---|---|---|
| 6.1.3 | **Number of goals scored** | **0** | **2** | **4** | **Q** | **7** | **8** | | 12.2.2 |
| | **Option A (in rand)** | 4 600 | **P** | 5 600 | 6 100 | 6 350 | 6 600 | | |
| | **Option B (in rand)** | 4 000 | 4 800 | 5 600 | 6 400 | 6 800 | 7 200 | | |

**TOTAL BONUS PAYMENT FOR EACH PLAYER**



1A vertical-intercept (0 ; 4 600)

1CA any other point correctly plotted

1CA correct line though P and Q and all other points correct

1A label

(4)

| 6.1.4 | Point Y on Annexure A ✓✓CA | 2 CA correct position (2) | 12.2.3 |
|---|---|---|---|

| Ques | Solution | Explanation | AS |
|------|----------|-------------|-----|
| 6.2.1 (a) | Perimeter = 2 (98 m + 72 m) $\checkmark$M<br><br>         = 340 m   $\checkmark$A$\checkmark$A | 1M substitution<br>1A simplification<br>1A unit<br>**Answer only full marks**<br>                  (3) | 12.3.1 |
| 6.2.1 (b) | Area of circle $= \pi \, r^2$<br>          $= 3{,}14 \times (16\,m)^2$ $\checkmark$SF<br><br>          $= 803{,}84$ m$^2$  $\checkmark$A<br><br>Area of semi-circle $= \dfrac{803{,}84\,m^2}{2}$<br>            $= 401{,}92$ m$^2$  $\checkmark$CA<br><br>         **OR**<br>Area of semi-circle $= \dfrac{1}{2}\pi r^2$  $\checkmark$M<br><br>         $= \dfrac{1}{2} \times 3{,}14 \times (16\,m)^2$$\checkmark$SF<br>         $= 401{,}92$ m$^2$  $\checkmark$CA<br>            ( **using** $\pi$ **A = 402,12m$^2$**) | 1SF substitution<br><br>1A Area of circle<br><br><br>1CA Area semi-circle<br><br><br>1M ½ of area of circle<br><br>1SF substitution<br><br>1CA Area semi-circle<br>**Answer only full marks**<br>                  (3) | 12.3.1 |

| Ques | Solution | Explanation | AS |
|------|----------|-------------|-----|
| | | | 12.1.1 |
| 6.2.2 | 8,5 m takes 25 minutes <br><br> 100 m will take $\dfrac{100 \, m \times 25 \, minutes}{8,5 \, m}$ ✓M <br><br> $= 294,11$ minutes ✓A <br><br> $= 4,90$ hours ✓CA <br><br> **OR** <br><br> 100 m will take $\dfrac{100 \, m \times \frac{25}{60}\,✓A}{8,5m}$ hours ✓M <br><br> $= 4,90$ hours ✓CA <br><br> **OR** <br><br> 1 m will take $\dfrac{25}{8,5}$ hours $= \dfrac{50}{17}$ hours ✓M <br><br> $\therefore$ 100 m will take $\dfrac{50}{17} \times 100 \div 60$ hours ✓A <br><br> $= 4,90$ hours ✓CA <br><br> **OR** <br><br> $8,5 : 25 = 100 \, m : x$ <br><br> $x = \dfrac{25 \times 100}{8,5} \div 60$ hours ✓M ✓A <br><br> $= 4,90$ hours ✓CA <br><br> **OR** <br><br> $100 \div 8,5 = 11,7647$ ✓M <br> $11,7647 \times 25$ min $= \dfrac{294}{60}$ hours ✓A <br><br> $= 4,90$ hours ✓CA <br><br> **OR** <br><br> $\dfrac{\frac{25}{60}}{8,5} = \dfrac{x}{100}$    ✓M <br>           ✓A <br><br> $8,5x = \dfrac{25 \times 100}{60}$ <br> $x = 4,90$ hours ✓CA | 1M using proportion concept <br><br> 1A solution in minutes <br> <u>1CA solution in hours</u> <br><br> $\boxed{\mathbf{4,90 \;=\; 4\dfrac{54}{60} \;=\; 4\dfrac{9}{10}}}$ <br><br> 1M using proportion concept <br><br> 1A conversion to hours <br><br> 1CA solution in hours <br><br><br> 1M using proportion concept <br><br> 1A conversion to hours <br><br> 1CA solution in hours <br><br><br> 1M using proportion concept <br><br> 1A conversion to hours <br><br> 1CA solution in hours <br><br> 1M using proportion concept <br><br> 1A conversion to hours <br><br> 1CA solution in hours <br><br> 1M using proportion concept <br><br> 1A conversion to hours <br><br> 1CA solution in hours <br><br> (3) | |
| | | | **[24]** |

                                                                       **TOTAL:**     **150**