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| **Grade 7 : Mathematics June Examination 2017**  **Memorandum** |

**General marking note:**

1. **Give full marks for answers only, unless otherwise stated.**
2. **Accept any alternative correct solution that is not included in the memorandum.**
3. **Apply CA when applicable.**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Section A** | | | | | | | | | |
| **QUESTION 1** | | | | | | | | | |
|  | |  | | Clarification | | | Mark | | |
| 1.1) | | **B**✓ | |  | | | 1 | | |
| 1.2) | | **C**✓ | |  | | | 1 | | |
| 1.3) | | **B**✓ | |  | | | 1 | | |
| 1.4) | | **C**✓ | |  | | | 1 | | |
| 1.5) | | **B**✓ | |  | | | 1 | | |
| 1.6) | | **B**✓ | |  | | | 1 | | |
| 1.7) | | **C**✓ | |  | | | 1 | | |
| 1.8) | | **B**✓ | |  | | | 1 | | |
| 1.9) | | **A**✓ | |  | | | 1 | | |
| 1.10) | | **C**✓ | |  | | | 1 | | |
|  | |  | |  | | | **[10]** | | |
| **Section B** | | | |  | | |  | | |
| **QUESTION 2** | | | | | | | | | |
| 2.1 | 210 0056  3 4560  +3 59 338✓  603 954✓ | | | Method 1mark  Answer 1mark  Or  Full marks answer and method  603 954✓✓ | | | 2 | | |
| 2.2. | 3 (4+5) – 12  = 3 (9) ✓ - 2  = 27 – 2  = 25 ✓ (2) | | | Full marks answer only  25✓✓ | | | 2 | | |
|  |  | | |  | | | **[4]** | | |
| **QUESTION 3** | | | | | | | | | |
| 3.1.1 | 12 ✓ | | |  | | | 1 | | |
| 3.1.2 | 1; 2;4; 8✓✓ | | | 1; 2 ✓; 4; 8✓ | | | 2 | | |
| 3.1.3 | 2; 3✓ | | |  | | | 1 | | |
| 3.1.4 | 3; 6; 12; 24✓✓ | | | 3; 6 ✓; 12; 24 ✓ | | | 2 | | |
| 3.1.5 | 24✓ | | |  | | | 1 | | |
| 3.2 | 52 =25 | | |  | | | 1 | | |
| 3.3 | = 3 + 4✓  = 7✓ | | | Full marks answer only    7✓✓ | | | 2 | | |
|  |  | | |  | | | **[10]** | | |
| **QUESTION 4** | | | | | | | | | |
| 4.1.1 | 15: 25 or 3:5✓ | | |  | | | 1 | | |
| 4.1.2 | or ✓ | | |  | | | 1 | | |
| 4.1.3 | ✓ | | |  | | | 1 | | |
| 4.2 | **Person:1**  × R 14 400 ✓  = R3 600 ✓  **Person:2**  × R 14 400 ✓  = R 10800 ✓ | | | R3 600 ✓✓  R10 800 ✓✓ | | | 4 | | |
|  |  | | |  | | | **[7]** | | |
| **QUESTION 5** | | | | | | | | | |
| 5.1.1 | |  | |  | | | 1 | | |
| 5.1.2 | | ✓ | |  | | | 1 | | |
| 5.1.3 | | 70% ✓ | | 70✓ | | | 1 | | |
| 5.1.4 | | ✓ | |  | | | 1 | | |
| 5.2.1 | | ✓ | |  | | | 1 | | |
| 5.2.2 | | ✓ | |  | | | 1 | | |
| 5.3 | |  | | 5✓ and 16 ✓ | | | 2 | | |
|  | |  | |  | | | **[8]** | | |
| **QUESTION 6** | | | | | | | | | |
| 6.1.1 | 57✓ | | |  | | | | 1 | |
| 6.1.2 | 56,70✓ | | |  | | | | 1 | |
| 6.2.1 | + ✓ = ✓ | | |  | | | | 2 | |
| 6.2.2 | Yes, ✓ = or ✓ is more than one whole✓ | | | Consider other logical reasons | | | | 3 | |
| 6.3 | R250 × 25% =R62.50 ✓  R250 – R62.50 ✓ =R187.50✓ | | | Answer only 3 marks  or  Answer and method 3 marks | | | | 3 | |
|  |  | | |  | | | | **[10]** | |
| **QUESTION 7** | | | | | | | | | |
| 7.1 | 7.1.1) 16✓ | | |  | | | 1 | | |
| 7.1.2) 5✓ | | |  | | | 1 | | |
| 7.1.3) 28✓ | | |  | | | 1 | | |
| 7.1.4) 9✓ | | |  | | | 1 | | |
|  |  | | |  | | | **[4]** | | |
| **QUESTION 8** | | | | | | | | | |
| 8.1 | | | 8.1.1) d= 90✓ | | 90✓ | | | | 1 |
|  | | | 8.1.2) f + g + h = 180✓ | | 180✓ | | | | 1 |
|  | | |  | |  | | | |  |
|  | | |  | |  | | | |  |
|  | | |  | |  | | | |  |
| 8.2 | | | 8.2.1) AC AE✓ | |  | | | | 1 |
|  | | | 8.2.2) AD BC ✓ | |  | | | | 1 |
|  | | | 8.2.3) ED AD ✓ | |  | | | | 1 |
|  | | |  | |  | | | |  |
| 8.3 | | | ABC ✓ and ADE ✓ | |  | | | | 2 |
|  | | |  | |  | | | |  |
| 8.4 | | | AEC or ✓ | |  | | | | 1 |
|  | | |  | |  | | | |  |
| 8.5 | | | 8.5.1) BC = 78mm to 80✓ mm ✓ | | 78 to 80 ✓  mm✓ | | | | 2 |
|  | | | 8.5.2) Reflex A= | | Please measure to verify | | | | 2 |
|  | | |  | |  | | | |  |
| 8.6.1 | | | 8.6.1) ✓ | |  | | | | 1 |
|  | | | 8.6.2) Angles on a straight line  or adjacent angles ✓ | |  | | | | 1 |
|  | | | 8.6.3) Reflex  ✓ | |  | | | | 1 |
|  | | | 8.6.4) c or ✓ | |  | | | | 1 |
|  | | | 8.6.5) right angle triangle ✓ | |  | | | | 1 |
|  | | |  | |  | | | |  |
| 8.7 | | | 4 Triangles or 4 ✓ | |  | | | | 1 |
|  | | |  | |  | | | | **[18]** |
| **QUESTION 9** | | | | | | | | | |
| 9.1 | | | 9.1.1) is an isosceles ✓ | |  | | | | 1 |
|  | | | 9.1.2) ABCD = Trapezium ✓ | |  | | | | 1 |
| 9.2 | | | ✓ | | ✓ | | | | 2 |
|  | | |  | |  | | | |  |
| 9.3 | | | 180 ✓ sum of angles in a triangle✓ | |  | | | | 2 |
|  | | |  | |  | | | |  |
|  | | |  | |  | | | |  |
| 9.4 | | | ABCD ✓ | |  | | | | 1 |
|  | | |  | |  | | | |  |
|  | | |  | |  | | | | **[7]** |
| **QUESTION 10** | | | | | | | | | |
|  | | | Study the rectangular prism (cuboid) and carefully answer the questions that follow. | | |  | | |  |
| 10.1.1 | | | 6 ✓ | | |  | | | 1 |
| 10.1.2 | | | 12 ✓ | | |  | | | 1 |
| 10.1.3 | | | 8 ✓ | | |  | | | 1 |
|  | | |  | | |  | | |  |
| 10.2.1 | | | The perimeter of the top face ABCD  Answer; Perimeter = 2L+2B  = (2×20) + (2×5) ✓  = 40cm+10cm  = 50cm ✓  OR  Perimeter = 2(L+B)  = 2(20cm+5cm) ✓  = 2(25cm)  = 50cm ✓ | | | 50 ✓ | | | 2 |
| 10.2.2 | | | The total surface area of the rectangular prism  Surface area =2 (L×B + B×H + L×H)  =2 [(20cm×5cm) + (5cm×3,5cm) + (20cm×3,5cm)]  =2(+ +) ✓  =2( )  = √✓ | | |  | | | 3 |
| 10.2.3 | | | The volume of the rectangular prism  Volume= L×B×H  = 20cm×5cm×3,5cm ✓  = 100cm×3,5cm  = | | |  | | | 2 |
|  | | |  | | |  | | | **[10]** |
| **QUESTION 11** | | | | | |  | | |  |
| 11.1 | | | Calculate the area of the rectangle BCDE.  Area = L×B  = 6cm×4cm ✓  = | | |  | | | 2 |
| 11.2.1 | | | Calculate the area of the triangle ABC  Area = × b × h  = × 3cm × 4cm✓  = × 12cm  = | | |  | | | 2 |
| 11.2.2 | | | How many triangles of ABC can fit into the rectangle BCDE?    Four Triangles✓✓ | | |  | | | 2 |
| 11.2.3 | | | Calculate the perimeter of the shape ACDE and write your answer in mm.  AC2 = (4cm)2 + (3cm)2  = 16cm2 + 9cm2 ✓  = 25cm2  AC = 5cm✓    Perimeter = 5cm + 6cm + 4cm + 9cm ✓  = 24cm✓  = 240mm✓ | | |  | | | 5 |
| **Total** | | | | | | | | | **100** |