# Mathematics · Grade 7

Memorandum · Term 1–4

TOTAL 90 MARKS

## Marking guidelines

1. Award method marks even where the final answer is wrong.
2. Accept any correct method, including one that differs from the memorandum.
3. An answer without the unit loses the unit mark, not the whole question.
4. Where a question asks for two or more items, award one mark per correct item.
5. Do not deduct marks for handwriting, provided the answer can be read.

| Question | Answer | Marks | Marking note |
|---|---|---|---|
| **QUESTION 1 · Multiple choice · 6 marks** | | | |
| **1.1** | c. −9 | **1** | |
| **1.2** | a. 6 × 6 × 6 | **1** | |
| **1.3** | b. 12 | **1** | |
| **1.4** | b. −9 < −4 | **1** | |
| **1.5** | a. obtuse-angled | **1** | |
| **1.6** | b. range | **1** | |
| **QUESTION 2 · Integers and exponents · 10 marks** | | | |
| **2.1** | a. −5 b. 4 c. −18 d. 17 | **4** | *1 mark each.* |
| **2.2** | a. 125 b. 16 c. 141 | **3** | *1 mark each.* |
| **2.3** | 2 × 2 × 3 × 3 × 7 | **3** | *2 marks for the method, 1 for the answer.* |
| **QUESTION 3 · Numbers in context · 11 marks** | | | |
| **3.1** | HCF = 42; LCM = 252 | **2** | *1 mark each.* |
| **3.2** | 720 ÷ 100 × 15 = R108 | **3** | *2 marks for the method, 1 for the answer.* |
| **3.3** | 154 ÷ 11 = 14; 28 and 126 | **3** | *1 mark for the parts, 1 per amount.* |

| Question | Answer | Marks | Marking note |
|---|---|---|---|
| **3.4** | a. $\frac{1}{4}$ = 0,25 = 25%  b. $\frac{4}{5}$ = 0,8 = 80%  c. $\frac{7}{8}$ = 0,875 = 87,5% | **3** | *1 mark per fraction if both forms are correct.* |
| **QUESTION 4 · Algebraic expressions · 10 marks** | | | |
| **4.1** | a. x + 15 = 42;  x = 27  b. 3m = 36 (accept 3 × m = 36);  m = 12 | **4** | *1 mark for each number sentence, 1 for each answer.* |
| **4.2** | a. 3(4) + (−7) = 5  b. $4^2$ − (−7) = 23 | **3** | *1 mark for the substitution, 1 per answer.* |
| **4.3** | a. n + 11  b. 3n  c. n − 7 | **3** | *1 mark each.* |
| **QUESTION 5 · Equations and patterns · 13 marks** | | | |
| **5.1** | a. 9x = 72;  x = 8  b. x + 6 = 11;  x = 5 | **3** | *2 marks for a., 1 for b.* |
| **5.2** | a. 48  b. Multiply the previous term by 2  c. 3, 6, 12, 24, 48, 96, 192 → the 7th term | **3** | *1 mark each.* |
| **5.3** | x = 2 → y = 4;  x = 5 → y = 13;  y = 22 → x = 8;  y = 37 → x = 13 | **4** | *1 mark per block.* |
| **5.4** | a. 95 + 2 × 20 = R135  b. Cost = 95 + 2n (accept any letter for the cost, e.g. k = 95 + 2n)  c. 95 + 2 × 50 = R195 | **3** | *1 mark each.* |
| **QUESTION 6 · Lines and 3D objects · 9 marks** | | | |
| **6.1** | 5 faces;  8 edges;  5 vertices | **2** | *2 marks if all three are correct; 1 if two are correct.* |
| **6.2** | A and C | **2** | *1 mark each; if all three letters are given, maximum 1.* |
| **6.3** | cube and triangular prism | **2** | *1 mark each.* |
| **6.4** | a. Parallel lines run alongside each other and never meet.  b. Intersecting lines cross at one point.  c. A line segment has two end points; a ray has one end point and carries on. | **3** | *1 mark each.* |
| **QUESTION 7 · Shapes and transformations · 13 marks** | | | |
| **7.1** | Three equal sides = equilateral;  Two equal sides = isosceles;  One angle of 90° = right-angled | **3** | *1 mark each.* |
| **7.2** | a. Chord  b. Sector  c. Radius | **3** | *1 mark each.* |
| **7.3** | a. Translation  b. Reflection  c. Rotation | **3** | *1 mark each.* |

| Question | Answer | Marks | Marking note |
|---|---|---|---|
| **7.4** | 6 squares right and 2 squares down | **2** | *1 mark for the left/right movement, 1 for the up/down movement.* |
| **7.5** | Four right angles; opposite sides equal. Accept any two correct properties, e.g. opposite sides are parallel; the diagonals are equal and bisect each other. | **2** | *1 mark each.* |
| **QUESTION 8 · Measurement · 9 marks** | | | |
| **8.1** | a. 2 × (12 + 11) = 46 cm  b. 12 × 11 = 132 cm²  c. 12 × 11 × 6 = 792 cm³ | **4** | *1 mark for the perimeter, 1 for the area, 2 for the volume.* |
| **8.2** | a. 35 000 cm²  b. 25 cm²  c. 750 cm³ | **3** | *1 mark each.* |
| **8.3** | Floor = 30 m²; each tile = 0,25 m²;  30 ÷ 0,25 = 120 tiles | **2** | *1 mark for the areas, 1 for the answer.* |
| **QUESTION 9 · Data Handling · 9 marks** | | | |
| **9.1** | a. 12  b. 39  c. 39 − 12 = 27  d. 21  e. (21 + 24) ÷ 2 = 22,5 | **5** | *1 mark each.* |
| **9.2** | a. All 900 learners of the school  b. The 60 learners who were asked | **2** | *1 mark each.* |
| **9.3** | a. Heads, tails  b. $\frac{1}{2}$ = 50% | **2** | *1 mark each; both forms are needed for b.* |

**Total** **90 marks**



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