

## **GENERAL EDUCATION AND TRAINING CERTIFICATE**

## **NQF LEVEL 1**

## **AET LEVEL 4 SITE-BASED ASSESSMENT**

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| **LEARNING AREA** | **:** | **MATHEMATICS AND MATHEMATICAL SCIENCES** |
| **CODE** | **:** | **MMSC4** |
| **TOOL** | **:** | **PROJECT** |
| **DURATION** | **:** | **3 WEEKS** |
| **MARKS** | **:** | **50** |

**This assessment tool consists 5 of pages.**

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| **INSTRUCTIONS AND INFORMATION FOR THE TEACHERS** |  |  |

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| 1. | This task must be completed over a period of 3 weeks. |  |  |

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| 2. | It is important that a class discussion be held and the progress of the learners is monitored at regular interval. |  |  |

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| **ACTIVITY 1** |

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| 1.1 | 1.1.1 | MEASUREMENT OF THE (Actual distance ) |  |  |

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|  | Distance on plan 1 cm (10 mm) | Actual distance 100 cm (1 m) |
| Kitchen tile floor: Length | 5cm (70 mm) | 5 m🗸 |
| Kitchen tile floor: Breadth | 2,5 (25 mm) | 2,5 m🗸 |
| Bedroom 2: Length | 4,5cm (45 mm) | 4,50 m🗸 |
| Bedroom 2:Breadth | 4,5 cm (45 mm) | 4,50 m🗸 |
| Width of the inside door | 13 mm | 1,3 m🗸 |
| Length of the kitchen window | 15 mm (1,5 cm) | 150 cm (1,5 m)🗸 |

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|  |  | (6) |

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|  | 1.1.2 | Square or rectangle |  | (1) |

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|  | 1.1.3 | To show direction to which the door opens🗸 |  | (1) |

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|  | 1.1.4 | The perimeter of the bedroom 2  🗸  /18 m  OR |  | (2) |

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|  | 1.1.5 | The area of kitchen tile floor:  A = 5m x 2,5m  = 12,5  The area of LIVING ROOM TILE FLOOR:  A = 6 m x 4,8 m  = 28,8  The area of kitchen tile floor and living room tile floor  = 12,5 + 28,8  = 41,3 |  |  |

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|  | 1.1.6 | Cost = = R4 366,50🗸 |  | (2) |

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|  | 1.1.7 | Area of the tiles OR =0,5m x 0,5 = 0,25m2  OR  = 165,2  Therefore 166 tiles will be needed🗸 |  | (2) |

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| 1.2 | Area of circle =  =🗸  = 113,0 |  | (2) |

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| 1.3 | 3 hours 45 minutes after midnight🗸  Accept: quarter to four 🗸 |  | (1) |

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| 1.4 | (a) | 23 hours and 10 minutes after midnight, which is 11 hours and 10 minutes after noon (midday) ten minutes after 9 in the evening🗸 |  |  |

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|  | (b) | 21:00/9.p.m🗸 (in digital time) |  | (1) |

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|  | (c) | 4:50 p.m./16:50🗸  (3 x 1) |  | (3)  **[22]** |

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| **ACTIVITY 2** |  |  |

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| 2.1 | 2.1.1 | Rectangle  Triangle |  |  |

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|  | 2.1.2 | Calculating Volume of Rectangular prism  Volume =  =🗸  =🗸  Calculating Volume of Triangular prism  Volume =  Volume =🗸  Calculating Volume of building.  rectangular prism + triangular prism |  | (4) |

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|  | 2.1.3 |  |  | (3) |

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|  | 2.1.4 | Calculate the area of the four sides of the building and add to the area of roof to get the total surface area as required.  Area of roof = 5 m x 10 m x 2 = 🗸  Area of two rectangular sides = 10 m x 5 m x 2 =  Area of two sides with triangular top:  =  =  =  total surface area of outside building including roof  =  = |  | (4) |

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|  | 2.2.1 | A net for the part of the original polyhedron that was sliced off.    🗸One mark for square base  🗸One mark for 4 side face quad or Trapeziums  🗸One mark for the top block made up of 5 squares |  | (3) |

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|  | 2.2.2 | The sliced Polyhedron has 7 faces,🗸 10 vertices🗸 and 15 edges🗸 |  | (3) |

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|  | 2.2.3 | Pentagon face  *page-14,-figure-1c*  **FIGURE C FIGURE D** |  |  |

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|  |  | (a)  (b) | One mark for showing the vertical dotted lines where the block was sliced. 🗸  One mark drawing correct shape🗸  (2 x 1) |  | (2) |

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|  |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | | **FIGURES** | **TYPES** | **FACES**  **(F)** | **VERTICES(V)** | **EDGES (E)** | | A | Rectangular block | 6 | 8🗸 | 12🗸 | | B | Sliced polyhedron with a rectangular face | 7 | 10 | 15 | | D | Sliced polyhedron with pentagonal face | 7🗸 | 10🗸 | 15🗸 | |  |  |
|  |  | Relationship: OR 🗸🗸 |  | (7) |
|  |  |  |  | **[28]** |

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| **TOTAL:** |  | **50** |