

## **GENERAL EDUCATION AND TRAINING CERTIFICATE**

## **NQF LEVEL 1**

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

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

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

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| **INSTRUCTIONS AND INFORMATION** |  |  |

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

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| 2. | The project can be done in groups of not more than 6 members. Each group member should however write his or her own work i.e. everybody must submit their individual work even though they worked as a team. |  |  |

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| 3. | Indicate the names of group members who worked on the project. |  |  |

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| 4. | Read the instructions and questions carefully, and do thorough planning before you start with the project. |  |  |

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| 5. | Activity 1 is marked using a rubric and Activity 2 is marked using a memorandum. |  |  |

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| 6. | You will need the following resources for this project   * Pencil * Ruler * Colouring pencils or crayons * Pair of scissor * A4 paper or cardboard * Calculator * Glue |  |  |

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| ACTIVITY 1 |

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|  | The drawing below shows different shapes that you can use in this project. Draw similar drawings in an A4 paper or cardboard and cut at least 14 triangles. A drawing is shown in Annexure A. Using the dimensions indicated in the diagram below learners can make more copies to cut the triangles. |  |  |

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|  | 10cm  10cm  5cm |  |  |

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| 1.1 | Cut two triangles and paste them on A4 paper or cardboard to make a parallelogram. |

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| 1.2 | Cut two triangles and paste them on A4 paper or cardboard to make a kite. |

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| 1.3 | Cut three triangles and paste them on A4 paper or cardboard to make a trapezium. |

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| 1.4 | Cut three triangles and paste them on A4 paper or cardboard to make a pentagon with two sides that are parallel sides |

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| 1.5 | Cut four triangles and paste them on A4 paper or cardboard to make the square shape and then answer the questions below: |

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|  | 1.5.1 | State all properties of a square. |  |  |

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|  | 1.5.2 | How many lines of symmetry are there in a square? |  | (2) |

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| 1.6 | If a triangle is given with the width of units and the height ofunits. Calculate the area of the triangle in terms of. Learners must find the formula for calculating the area of the triangle. |  | (6)  **[33]** |

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| **ACTIVITY 2** |

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| 2.1 | Look at the diagram below. Discuss the shape and describe them to one another; using descriptions like: number of sides, straight line sides, flat shape, closed shape, in-and-out shape. |  |  |

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|  | SHUTERS-MATHS-GRADE-7_234_1 |  |  |

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|  | 2.1.1 | Draw a sketch of the net of this solid shown above, showing its dimensions. |  | (4) |

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|  | 2.1.2 | Write down the geometrical name of the solid. |  | (1) |

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|  | 2.1.3 | Write any two shapes that are found in this diagram above. |  | (2) |

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|  | 2.1.4 | Calculate volume and the surface area of the solid above. |  | (10)  **[17]** |

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|  |  |  |  | **[50]** |

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|  | This is a marking rubric for marking Question (1.1-1.5.1) |  |  |

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| Criteria | Level | | | | | Marks |
| 1 | 2 | 3 | 4 | 5 |
| Participation in a group | Learners do not function as a group | One or two learner in a group take part in an activity | Half of learners in the group are actively involved | Most learners are actively involved and share ideas | All learners are actively involved with enthusiasm |  |
| Properties of the square | No effort made | Less than two properties given | At least two properties were identified | 3 to 4 properties are given | More than 4 properties given |  |
| Structures of different shapes | No structures made | Not all structure made | Less than four structures made | More than four structure made | Excellent structure |  |
| Presentation and general impression | Untidy work little effort taken with presentation. | Work in organised fashion, some effort taken | Partially presented | Work well presented, neat and complete | Excellent presentation |  |
| Concepts of shapes | Demonstrate little understanding and knowledge of the concept | Demonstrate mostly inappropriate concepts | Demonstrate a partial understand and knowledge of the main concepts | Demonstrate an understanding and the knowledge of the main concepts | Demonstrate a thorough understanding and knowledge of the concepts |  |
|  |  |  |  | TOTAL | |  |

ANNEXURE A