



higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

GENERAL EDUCATION AND TRAINING CERTIFICATE

NQF LEVEL 1

ABET LEVEL 4 SITE-BASED ASSESSMENT

**LEARNING AREA : MATHEMATICS AND
MATHEMATICAL SCIENCES**

CODE : MMSC4

TASK : PROJECT

DURATION : 3 WEEKS

MARKS : 50

This assessment task consists of 5 pages.

INSTRUCTIONS AND INFORMATION

1. This project must be completed over a period of 3 weeks.
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.
3. Indicate the names of group members who worked on the project.
4. Read the instructions and questions carefully, and do thorough planning before you start with the project.
5. Activity 1 is marked using a rubric and Activity 2 is marked using a memorandum.
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

ACTIVITY 1

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.



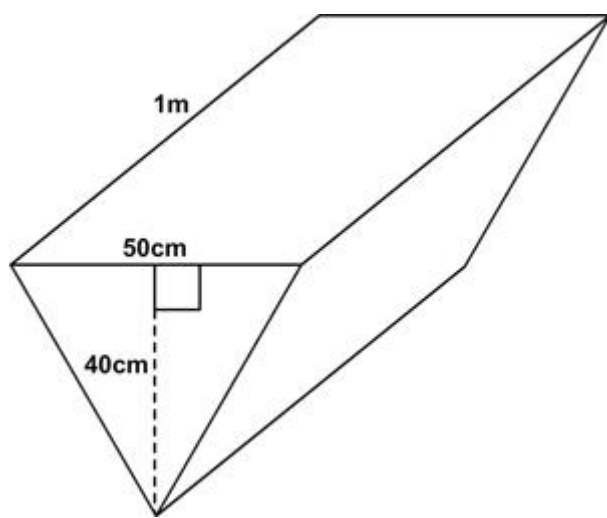
- 1.1 Cut two triangles and paste them on A4 paper or cardboard to make a parallelogram.
- 1.2 Cut two triangles and paste them on A4 paper or cardboard to make a kite.
- 1.3 Cut three triangles and paste them on A4 paper or cardboard to make a trapezium.
- 1.4 Cut three triangles and paste them on A4 paper or cardboard to make a pentagon with two sides that are parallel sides
- 1.5 Cut four triangles and paste them on A4 paper or cardboard to make the square shape and then answer the questions below:
 - 1.5.1 State all properties of a square.

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

1.6 If a triangle is given with the width of $(x + 2)$ units and the height of $2x$ units. Calculate the area of the triangle in terms of x . Learners must find the formula for calculating the area of the triangle. (6)
[33]

ACTIVITY 2

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.



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

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

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

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

[50]

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

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		<u>25</u>

ANNEXURE A

