



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

TOOL : PROJECT

DURATION : 3 WEEKS

MARKS : 50

This assessment tool consists of 3 pages.

INSTRUCTIONS AND INFORMATION FOR THE TEACHER

1. This project must be completed over a period of 3 weeks.
2. It is important that class discussions be held and the progress of the learners is monitored at regular intervals
3. Activity 1 is marked using a rubric and Activity 2 a memorandum will be used
4. In this project learners will demonstrate the use a triangles to form different shapes
5. Calculating the area and the perimeter of different shapes

ACTIVITY 1

This is a marking rubric for marking Question 1.1-1.5.1

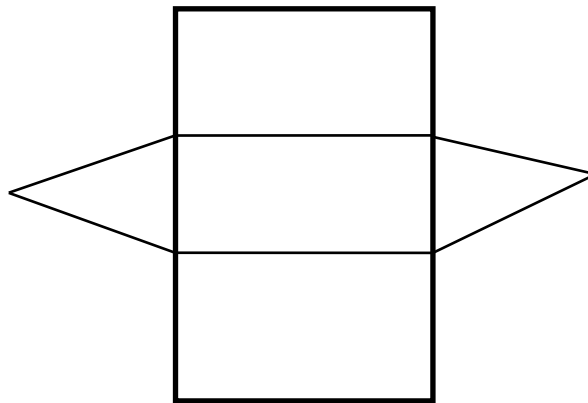
Criteria	Level					Marks
	1	2	3	4	5	
Participation in a group	Learners do not function as a group	One or two learner in a group take part in an activity	Half of learners in the group are actively involved	Most learners are actively involved and share ideas	All learners are actively involved with in enthusiasm	
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>

1.5.2 4 lines of symmetry ✓✓ (2)

1.6 Area of a triangle = $\frac{1}{2}b \times h$ ✓
 $= \frac{1}{2}(x+2)(2x)$ ✓ ✓
 $= \frac{1}{2}(2x^2 + 4x)$ ✓
 $= x^2 + 2x$ ✓✓ (6)

ACTIVITY 2

2.1.1



(4)

2.1.2 Triangular prism ✓ (1)

2.1.3 Rectangle, triangle, square ✓✓ (2)

2.1.4 The volume of a triangular prism = $\frac{1}{2}b \times h \times H$ ✓
 $v = \frac{1}{2} \times 50cm \times 40cm \times 100cm$ ✓
 $v = 100000cm^3$ ✓✓

Surface area of triangular prism = $2(\frac{1}{2}b \times h) + 2ls \times bl$ ✓
 $s^2 = (25cm)^2 + (40cm)^2$ ✓
 $s = \sqrt{2225cm^2}$
 $s = 47,2 cm$ ✓

$SA = \frac{1}{2}(50cm \times 40cm) + 2 \times 100 \times 47,2 + 50cm \times 100cm$ ✓
 $SA = 1000 + 9440 + 5000cm^2$ ✓
 $SA = 15440cm^2$ ✓ (10)

TOTAL : 50