



**higher education
& training**

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

GENERAL EDUCATION AND TRAINING CERTIFICATE

NQF LEVEL 1

AET LEVEL 4 SITE-BASED ASSESSMENT

**LEARNING AREA : MATHEMATICS AND
MATHEMATICAL SCIENCES**

CODE : MMSC4

TASK : ASSIGNMENT

DURATION : TWO WEEKS

MARKS : 50

This assessment task consists of 4 pages.

INSTRUCTIONS AND INFORMATION

1. Answer ALL the questions in the answer book.
2. This assignment has two sections; Section A can be done in groups of 2 - 3 and Section B individually.
3. Section A must be done for 3 days.
4. Section B MUST be done under controlled situation for an hour.

SECTION A(Group work)**ACTIVITY 1**

Simplify the following

- 1.1 $a + a + a + a =$ (1)
- 1.2 $3x \div 3 =$ (1)
- 1.3 $-p - p \times 4 =$ (1)
- 1.4 $(-3)^2 (-2)^3 =$ (1)
- 1.5 $\sqrt[3]{27p^{27}}$ (1)

ACTIVITY 2

Multiply and simplify if necessary:

- 2.1 $2xy(3x^2 y^2 - 4xy - 5)$ (3)
- 2.2 $2x - 3(x - y - z)$ (2)
- 2.3 $(2a - 1)^2 - (a - 1)(a - 1)$ (2)

ACTIVITY 3

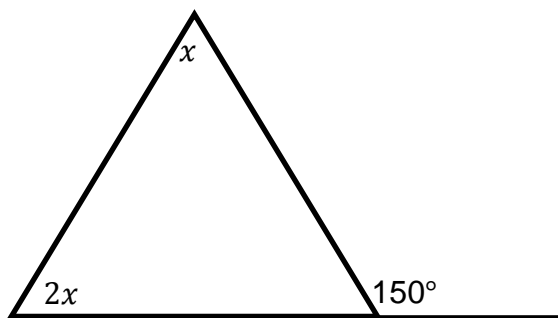
Factorise fully:

- 3.1 $10t^2 + 5t^3$ (2)
- 3.2 $49a^2 - 9b^2$ (2)
- 3.3 $6pq - 3pq - 2wq + wz$ (2)

Solve for x :

4.1 $x(3x - 1) = 0$ (2)

4.2



(2)

4.3 Solve the inequality $2x + 1 \leq -17$ and represent the answer on a line number. (3)
[25]

SECTION B

INDIVIDUAL WORK

ACTIVITY 1

The following expression in x is given : $4x^6 - x^2y + x^3y^2 - 2 - x$

1.1 How many terms do the expression have? (1)

1.2 Write down the co-efficient of x^6 ? (1)

1.3 What is the exponent of x in the third term? (1)

1.4 Give the constant term of the expression (1)

1.5 What is an algebraic expression called if it contains
(a) 2 terms (1)
(b) 3 terms (1)

ACTIVITY 2

Compare the following algebraic statements by inserting the following symbols ($>$; $<$; $=$) in the boxes below:

2.1 $p \cdot p \cdot p \cdot p$ p^4 (1)

2.2 $5a^2 - 4a^2$ $4a^2 - a^2 + 3a^2$ (1)

2.3 $\frac{1}{3} \div 2$ $\frac{1}{7}$ (1)

2.4 Subtract $9a - 4b - c$ from $4a - 2b - c$ (2)

ACTIVITY 3

3.1 In a netball match Thandi scores twice as many goals as Tumi. Together they score 15 goals. How many goals did Thandi score? (3)

3.2 The perimeter of a rectangle is 20cm. Find the length and width of the rectangle if the length is 3cm less than twice its width. (4)

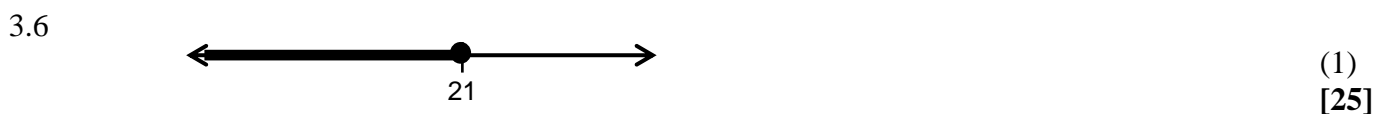
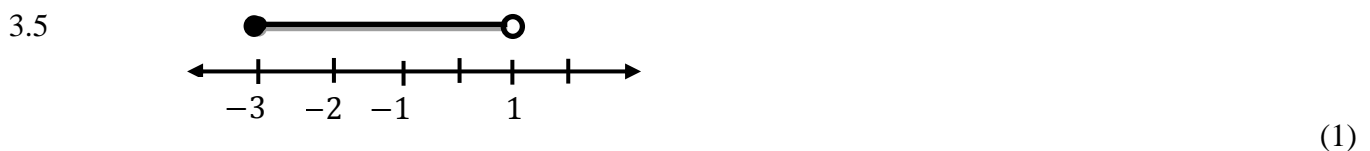
3.3 Solve for x : (2)

3.3.1 $3(x + 2) = 54$

3.3.2 $\frac{x}{2} = 32$ (1)

3.4 Evaluate $4xy^2$ if $x = 3$ and $y = -1$ (2)

Write the following in the set-builder notation



TOTAL: 50