



**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

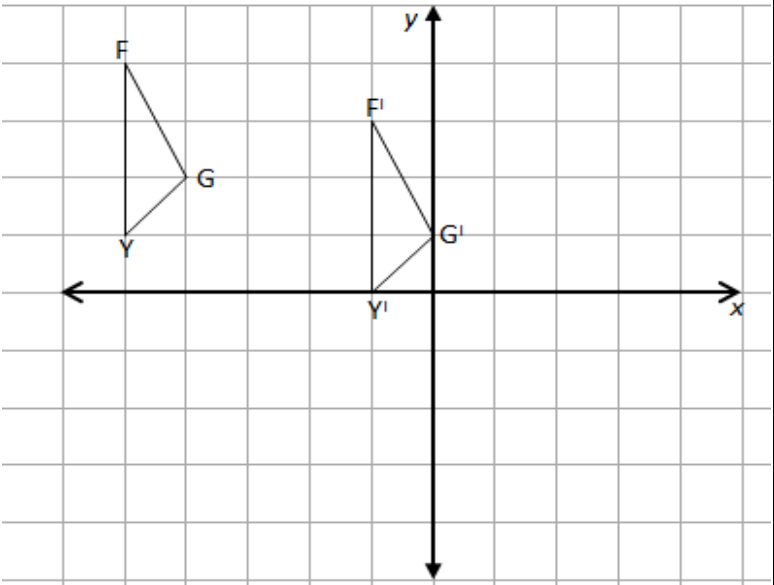
TOOL : WORKSHEET

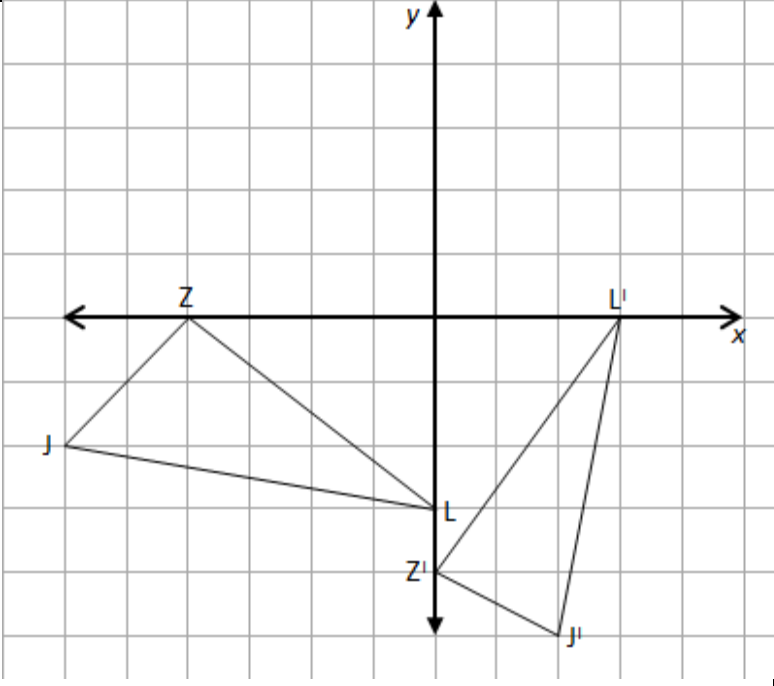
DURATION : 2 HOURS

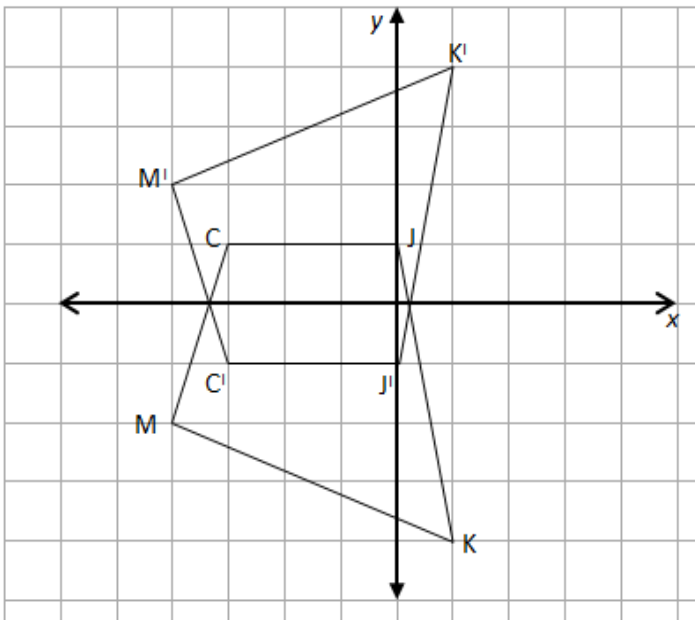
MARKS : 50

This assessment tools consists of 4 pages.

ACTIVITY 1

1.1	1.1.1		Correct points	(3)
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	1.1.2		Correct points	(3)
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	1.1.3		Correct points	
1.2	1.2.1	Translation 1 unit to the right✓✓	Correct name Correct explanation	(3) (2)

	1.2.2	Reflection along the y – axis✓✓	Correct name Correct explanation	(2)
1.3	1.3.1	$J(1; 3), U(0; 5), R(1; 5)$ $J'(3; 9), U'(0; 15), R'(3; 15)$ ✓✓✓	Each correct vertex	(3)
	1.3.2	$P(-5; 5), Q(-1; 7), R(-3; -2)$ $P'(-5; -5), Q'(-1; -7), R'(-3; 2)$ ✓✓✓	Each correct vertex	(3) [19]

ACTIVITY 2		
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2.1	2.1.1	$16a^2b - 24ab^2$ $= 8ab(2a - 3b)$ ✓✓	Correct HCF correct bracket	(2)
	2.1.2	$3m^2n - 3mn^2 + 3mn$ $= 3mn(m - n + 1)$ ✓✓	Correct HCF Correct brackets	(2)
	2.1.3	$5(3p + q) - r(3p + q)$ $= (3p + q)(5 - r)$ ✓✓	Each correct brackets	(2)
2.2	2.2.1	$4x^2 - y^2$ $= (2x - y)(2x + y)$ ✓✓	Each correct brackets	(2)
	2.2.2	$27a^3 - 3ab^2$ $= 3a(9a^2 - b^2)$ ✓ $= 3a(3a - b)(3a + b)$ ✓✓	Correct HCF Correct Difference of squares	(3)

2.3	2.3.1	factors of 18: $1 \times 18 \checkmark$ $9 \times 2 \checkmark$ $6 \times 3 \checkmark$	Each correct factors	(3)
	2.3.2	$-6 + 3 = -3 \checkmark$	Correct addition	(1)
	2.3.3	$(a - 6)(a + 3) \checkmark$	Each correct brackets	(1)
2.4	2.4	$(x + 4)(x + 5) \checkmark \checkmark$	Each correct brackets	(2)
2.5		$4a + 6c - 2ab - 3bc$ $= 4a - 2ab \text{ and } 6c - 3bc \checkmark$ $= 2a(2 - b) + 3c(2 - b) \checkmark$ $= (2 - b)(2a + 3c) \checkmark$	correct grouping correct HCF correct answer	(3)
2.6	2.6.1	$ab + 3 - 2b + 4ab + 10b$ $= ab + 4ab - 2b + 10b + 3 \checkmark$ $= 5ab + 8b + 3 \checkmark$	Correct like terms Correct answer	(2)
	2.6.2	$3x^2 + 2x + 2x^2 - (x^2 - x)$ $= 3x^2 + 2x^2 - x^2 + 2x + x \checkmark$ $= 4x^2 + 3x \checkmark$	Correct like terms Correct answer	(2)
	2.6.3	$(x - 3)(x - 4)$ $= x(x - 4) - 3(x - 4)$ $= x^2 - 4x - 3x + 12 \checkmark$ $= x^2 - 7x + 12 \checkmark \checkmark$	Correct simplification Correct answer	(3)
	2.6.4	$(2a - 3)(3a + 4)$ $= 2a(3a + 4) - 3(3a + 4)$ $= 6a^2 + 8a - 9a - 12 \checkmark$ $= 6a^2 - a - 12 \checkmark \checkmark$	Correct simplification Correct answer	(3) [31]

TOTAL: 50