



**higher education
& training**

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

GENERAL EDUCATION AND TRAINING CERTIFICATE

NQF LEVEL 1

ABET LEVEL 4 SUMMATIVE ASSESSMENT

**LEARNING AREA : MATHEMATICS AND
MATHEMATICAL SCIENCES**

CODE : MMSC4

TOOL : ASSIGNMENT

TIME : TWO WEEKS

MARKS : 50

This assessment tool consists of 5 pages.

INSTRUCTION AND INFORMATION FOR THE TEACHER

1. This assignment is based on Unit Standards ID 7452 ; ID7448 and ID7453 can be given while the Unit Standards title is taught.

QUESTION 1

1.1	1.1.1	Workers per class	Total amount				Correct answer	(3)
		5	400 – 225 = 175					
		11	610 – 225 = 385					
		15	820 – 225 = 595					
		3	330 – 225 = 105					
		25	1 100 – 225 = 875					
		∴ when we divide money left after subtracting the fixed price by the number of workers in a class, we get R35✓ ∴ Kate charged R35✓✓ for each worker per class						
	1.1.2	y = 35x + 225✓✓				Correct formula	(2)	
	1.1.3	y = 35x + 225 505 = 35x + 225✓ 35x = 505 – 225✓ 35x = 280 x = 8✓				Correct substitution Correct transposing Correct answer	(3)	
1.2	1.2.1		speed	distance	time		Correct answer	(4)
		Runner 1	11 km/h	11x✓	x✓			
		Runner 2	9 km/h	9x✓	x✓			
	1.2.2	Time is the same as they started at the same time 11x + 9x = 70✓ 20x = 70 x = $\frac{7}{2}$ or 3½✓ ∴ 5:30 + 3:30 = 9 o'clock✓ ∴ At 9 o'clock they will be 70 km apart					(3)	
								[15]

QUESTION 2

2.1	2.1.1	Loaves of Bread (B)	0	1	2	3	5	7✓	30	Correct Values	(4)
		Total amount of expenses (R)	500	505	510✓	515	525✓	535	650✓		

	2.1.2	Loaves of Bread (B) is an independent variable. ✓	Correct answer	(1)
--	-------	---	----------------	-----

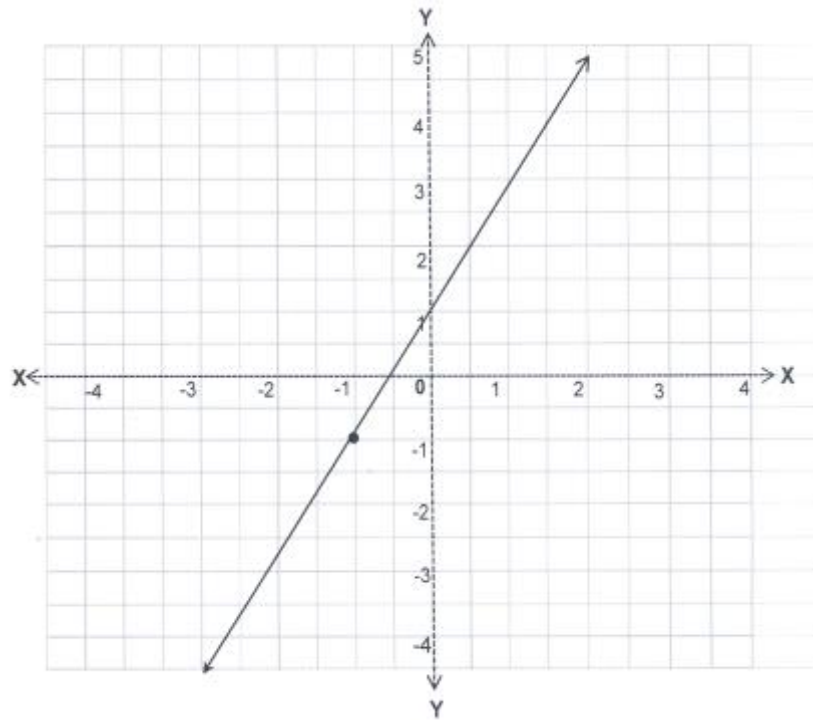
	2.1.3	<p>1 mark for the labelling on the x-axis 1 mark for the labelling on the y-axis 1 mark for the relevant numbering of both axes 2 marks for plotting 4 correct points</p>		(5)
--	-------	--	--	-----

2.2	2.2.1	formula $C = 8n$ ✓	Correct answer	(2)
	2.2.2	<ul style="list-style-type: none"> The cost making loaves of bread ✓ Mr Mchunu's bakery Any relevant heading	Relevant heading	(1)
	2.2.3	$x = \frac{592}{8}$ ✓ 74 loaves ✓	Correct calculation Correct answer	(2)
				[15]

QUESTION 3		
------------	--	--

3.1	3.1.1	<p>Row 1 : 1</p> <p>Row 2 : 3</p> <p>Row 3 : 5</p> <p>Row 4 : 7</p> <p>Left = 1, 2, 5, 10</p> <p>Right=1, 4, 9, 16</p> <p>$\therefore \text{Row: } 7 + 3 \times 2 = 13 \checkmark \checkmark$</p>	<p>Correct answer</p>	(2)
	3.1.2	Last number in Row 7 = $7^2 \checkmark = 49 \checkmark$	<p>Correct formula</p> <p>Correct answer</p>	(2)
	3.1.3	<p>Pattern :1; 3; 5; 7</p> <p>$a = 1$ and $d = 2$</p> <p>$\therefore T_n = a + (n - 1)d$</p> <p>$T_n = 1 + (n - 1)2 \checkmark$</p> <p>$T_n = 1 + 2n - 2$</p> <p>$T_n = 2n - 1 \checkmark \checkmark$</p>	<p>Method</p> <p>Correct answer</p>	(3)
	3.1.4	<p>$T_n = 2n - 1$</p> <p>$59 = 2n - 1 \checkmark$</p> <p>$2n = 59 + 1 \checkmark$</p> <p>$n = 30$</p>	<p>Correct substitution</p> <p>Correct answer</p>	(2)

3.2	x	-2	-1	0	1	2			
	y	-3	-1	1	3	5			

	3.2.1			
2 mark for correct plotting (show ALL plotted points) 1 mark for correct joining the points				
				(3)

	3.2.2	Increasing.✓ The gradient m is positive.✓	Correct answer	
			Relevant justification	
				(2)

	3.2.3	For x-intercepts let $y = 0$ $0 = 2x + 1$ $\therefore x = -\frac{1}{2}$ x-intercepts is $(-\frac{1}{2}; 0)$ ✓ y-intercepts is $(0; 1)$ ✓	Correct answer	(2)
--	-------	--	----------------	-----

	3.3.1	$y = 5$ ✓		(1)
--	-------	-----------	--	-----

	3.3.2	$x = 4$ ✓		(1)
--	-------	-----------	--	-----

	3.3.3	$y = x - 3$ ✓✓		(2)
				[20]

TOTAL: 50