education
MPUMALANGA PROVINCE
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 11

MATHEMATICS MONTHLY TEST

SEPTEMBER 2023

MARKING GUIDELINE

MARKS: 50 marks

This marking guideline consists of 6 pages.

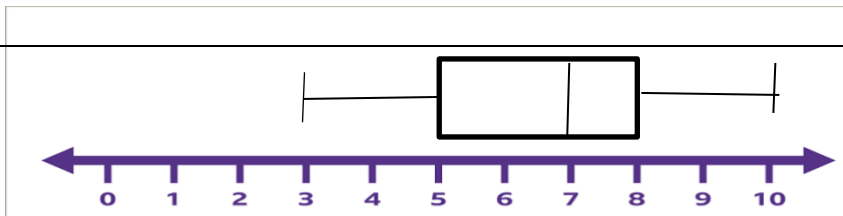
NOTE:

1. If a candidate answered a question TWICE, mark only the FIRST attempt.
2. If a candidate crossed out an answer and did not redo it, mark the crossed-out answer.
3. Consistent accuracy applies to ALL aspects of the marking memorandum.
4. Assuming values/answers in order to solve a problem is unacceptable.

LET WEL:

5. *As 'n kandidaat 'n vraag TWEE keer beantwoord het, sien slegs die EERSTE poging na.*
6. *As 'n kandidaat 'n antwoord deurgehaal en nie oorgedoen het nie, sien die deurgehaalde antwoord na.*
7. *Volgehoue akkuraatheid is op ALLE aspekte van die memorandum van toepassing.*
8. *Dit is onaanvaarbaar om waardes/antwoorde te veronderstel om 'n probleem op te los.*
9. Write neatly and legibly.

QUESTION/*VRAAG* 1

1.1.1	$\frac{66}{10} = 0{,}66$	✓66 ✓6.60 (2)
1.1.2	8	✓8 (1)
1.1.3	Min:3 Max:10 Median: 7 Lower quartile: 5 Upper quartile: 10	✓✓✓ all correct (3)
1.1.4	$8-5=3$	✓ 8 and 5 ✓3 (2)
1.1.5		✓✓ (2)
1.1.6	Skewed to the left, mean is smaller than the median **OR** longer rectangle on the left	✓ (1)
1.1.7	2,01	✓✓answer (2)
1.1.8	$\bar{x}+1.SD = 6{,}60+1\times 2{,}01$ $= 8{,}61$	✓8.61 ✓answer (2)

	$\therefore$1 learner	
		[15]

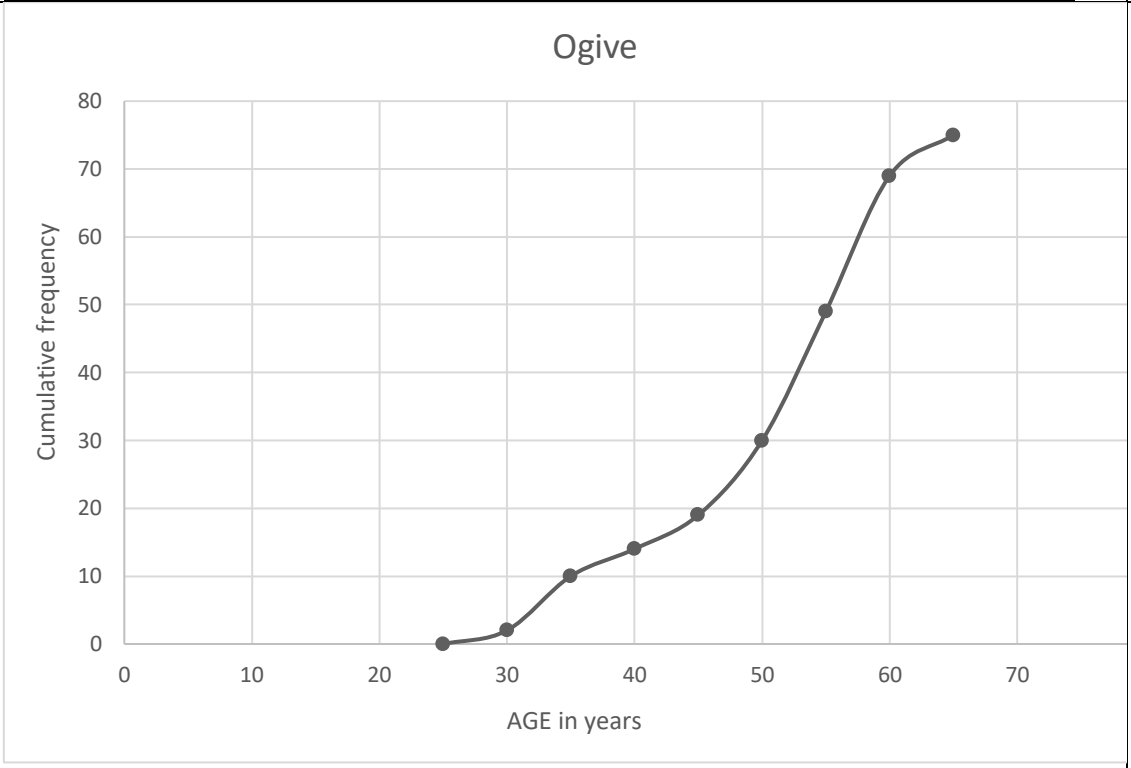
QUESTION/*VRAAG* 2

2.1

AGE	**FREQUENCY**	**CUMULATIVE FREQUENCY**
$25 < A \leq 30$	2	**2**
$30 < A \leq 35$	8	**10**
$35 < A \leq 40$	4	**14**
$40 < A \leq 45$	5	**19**
$45 < A \leq 50$	11	**30**
$50 < A \leq 55$	19	**49**
$55 < A \leq 60$	20	**69**
$60 < A \leq 65$	6	**75**

✓✓✓✓ answer (4)

2.2



✓25:0
✓✓all points
✓ shape
(4)

2.3 *Est.median=52 or 53*

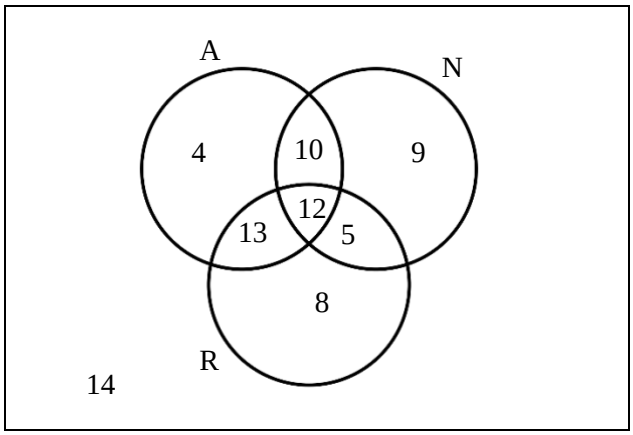
✓✓answer
(2)

2.4

✓ calculation

	Percentage $= \frac{75-57}{75} = \frac{18}{75} = 24\%$	✓ answer(2)
		[12]

QUESTION 3

3.1	$P(A) = 1 - P(not\ A)$ $= 1 - 0,45$ $= 0,55$ $P(A\,or\,B) = P(A) + P(B) - P(A\,and\,B)$ $0,685 = 0,55 + 0,3 - P(A\,and\,B)$ $\therefore P(A\,and\,B) = 0,165$ $P(A) \times P(B) = 0,55 \times 0,3$ $= 0,165$ $P(A\,and\,B) = P(A) \times P(B)$ $\therefore$ Events A and B are independent.	✓ $P(A) = 0,55$ ✓ substitution ✓ 0,165 ✓ 0,165 ✓ conclusion (5)
3.2.1	S = 75  	✓10 ✓13 ✓8 ✓14 ✓all correct (5)
3.2.2.1	$\frac{73}{75}$	✓✓answer (2)
3.2.2.2	$\frac{40}{75} = \frac{18}{15}$	✓✓answer (2)
3.2.2.3	$\frac{14}{75}$	✓✓answer (2)
		[16]

QUESTION 4

4.1	$\frac{35}{40} = 0{,}875$	✓answer (1)
4.2	$\frac{5}{40} \times \frac{35}{39} + \frac{35}{40} \times \frac{5}{39} = \frac{35}{156}$	✓ $\frac{5}{40} \times \frac{35}{39}$ ✓ $\frac{35}{40} \times \frac{5}{39}$ ✓ $\frac{35}{156}$ (3)
4.3	$\frac{5}{40} \times \frac{4}{39} = \frac{20}{1560} = \frac{1}{78}$	✓ $\frac{5}{40}$ ✓ $\frac{4}{39}$ ✓ $\frac{1}{78}$ (3)
		[7]

TOTAL: 50