



Grade 12 Data Handling

2025 Trial Papers Marking Guidelines

Mr. K.L. Ratlabala

Kgapane High School

QUESTION/VRAAG 1

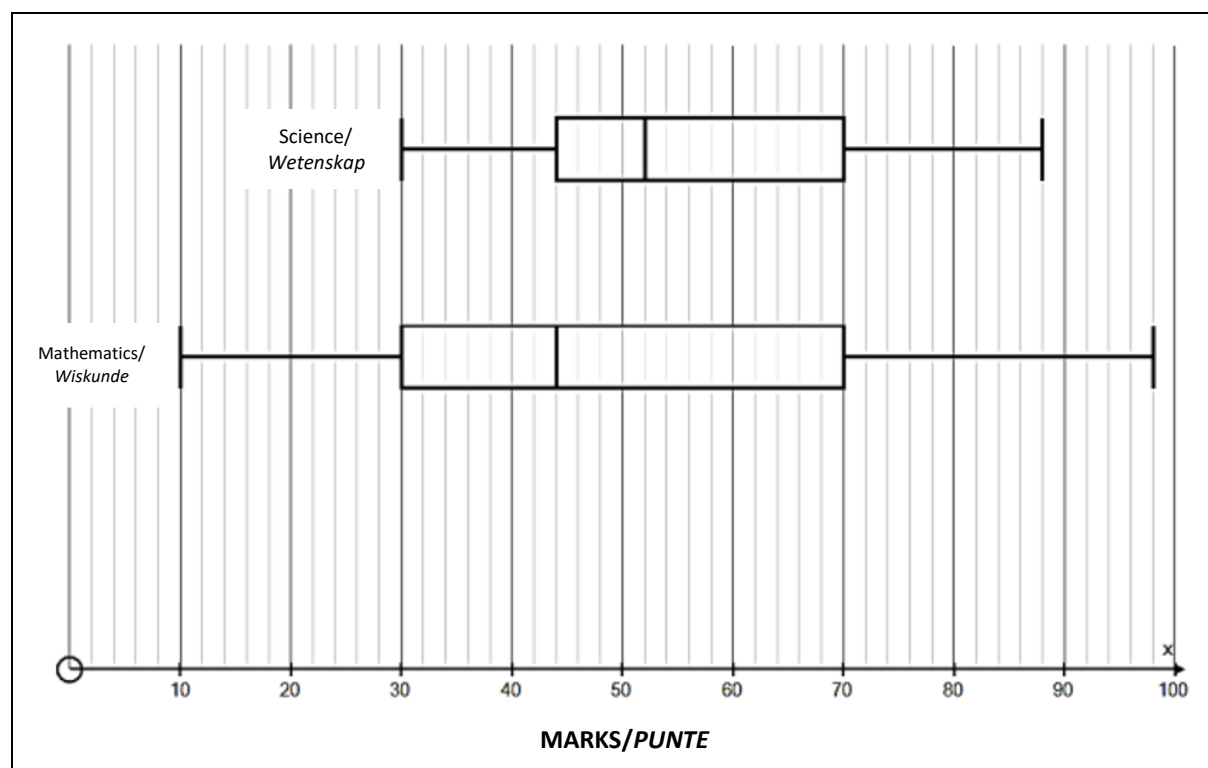
Data Set/Datastel:			
15	17	20	20
29	29	30	11t
			11t + 2
21	22	24	
36	38	55	

1.1	Mode/ <i>Modus</i> = 20	✓ answer/ <i>antwoord</i>	(1)
1.2	$Q_1 = 20$ $Q_3 = \frac{22t + 2}{2} = 11t + 1$ $IQR = Q_3 - Q_1$ $14 = 11t + 1 - 20$ $\therefore t = 3$	✓ Q_1 ✓ $Q_3 = 11t + 1$ ✓ answer/ <i>antwoord</i>	(3)
1.3	$\bar{x} = \frac{444}{16}$ $\therefore = 27,75$ (Answer only full marks/ <i>Slegs antwoord – volpunte</i>)	✓ 444 ✓ answer/ <i>antwoord</i>	(2)
1.4	Standard deviation/ <i>Standaardafwyking</i> = 9,86	✓ answer/ <i>antwoord</i>	(1)
1.5	$\bar{x} - sd = 27,75 - 9,86$ $= 17,89$ 2 visitors 2 <i>besoekers</i>	✓ $27,75 - 9,86$ correct substitution <i>korrekte vervanging</i> ✓ 17,89 ✓ answer/ <i>antwoord</i>	(3)
			[10]

QUESTION/VRAAG 2

Years / Jaar										
	1	2	3	4	5	6	7	8	9	10
Temperatures (degrees Celsius) x	41	9	30	15	25	20	20	35	39	16
Temperature (grade Celsius) x										
Finishing times of athletes (in minutes) y	72	30	66	29	45	43	41	66	68	31
Eindtyd van atleet (in minute) y										

2.1	$r = 0,96$	✓ answer/antwoord	(1)	
2.2	Very strong positive correlation <i>Baie sterk positiewe korrelasie</i>	✓ very strong positive correlation <i>Baie sterk positiewe korrelasie</i>	(1)	
2.3	$a = 10,92$ $b = 1,53$ $y = 10,92 + 1,53x$	✓ correct value of a <i>korrekte waarde van a</i> ✓ correct value of b <i>korrekte waarde van b</i> ✓ answer/antwoord	(3)	
2.4	$57 = 10,92 + 1,53x$ $x = 30$	✓ substitution/vervanging ✓ answer/antwoord	(2)	
2.5	Temperatures versus Finishing Time <i>Temperature teenoor Eindtyd</i> Finishing Time (in minutes) <i>Eindtyd (in minute)</i> Temperatures (in Degrees Celcius) <i>Temperature (in Grade Celsius)</i>		✓ Any two correct points <i>Enige twee korrekte punte</i> ✓ straight line joining points for $x \in [9;41]$ <i>Reguitlyn verbind punte vir $x \in [9;41]$</i>	(2)
			[9]	

QUESTION/VRAAG 1

1.1	Range/Omvang : Highest – Lowest/ <i>Hoogste – Laagste</i> = 98 – 10 = 88	✓substitution/ <i>vervanging</i> ✓answer/ <i>antwoord</i> (2)
1.2	Median/ <i>Mediaan</i> = 52	✓answer/ <i>antwoord</i> (1) (Accept 51-53)
1.3	IQR/ <i>IKV</i> = $Q_3 - Q_1$ = 70 – 44 = 26	✓substitution/ <i>vervanging</i> ✓answer/ <i>antwoord</i> (2) (Q_3 – accept 69-71) (Q_1 – accept 43-45) CA the answer
1.4	Science / <i>Wetenskap</i> . The median and minimum in Science is higher than Mathematics/ <i>Die mediaan en minimum vir Wetenskap is hoër as Wiskunde</i> .	✓Science/ <i>Wetenskap</i> ✓Reason/ <i>Rede</i> (2)
1.5	Mathematics/ <i>Wiskunde</i> . Range is 88% and the IQR is 40 compared to Science with Range of 58% and IQR of 26/ <i>Omvang is 88% en die IKO is 40 in vergelyking met Wetenskap wat 'n omvang van 58% 'n en IKO van 26 het.</i>	✓Mathematics/ <i>Wiskunde</i> ✓Reason/ <i>Rede</i> (2) (The reason can only be in terms of Range and IQR)
1.6	25% or/of 0,25	✓answer/ <i>antwoord</i> (1)
		[10]

QUESTION/VRAAG 2

2.1	Yes. It would strengthen the correlation coefficient/ <i>Ja. Dit sal die korrelasie koëffisient versterk</i>	✓answer/antwoord (1)
2.2	Closer to negative one as the gradient is negative or the relationship is indirect./ <i>Nader na negatief een, want die gradiënt is negatief of die verwantskap is omgekeerd</i>	✓answer/antwoord ✓reason/rede (2)
2.3	No/Nee. The correlation is not equal to -1 ./ <i>Die korrelasie is nie gelyk aan -1 nie.</i>	✓answer/antwoord ✓reason/rede (2)
2.4	He is saying that the value for x is outside of the lowest and the highest values used to find the line of best fit so he cannot be sure if it is accurate./ <i>Hy sê die waarde van x is buite die laagste en hoogste waardes wat gebruik word om die aanpassing lyn te verkry, hy kan nie seker wees of dit akkuraat is nie.</i>	✓✓reason/rede (2)
		[7]

QUESTION/VRAAG 1

	SOLUTIONS/OPLOSSINGS			Mark descriptions/ Punt omskrywing	Marks/ Punte
1.1	Class Interval/ Klasinterval (Marks/Punte in %)	Frequency/ Frekwensie	Cumulative frequency/ Kumulatiewe frekwensie	✓ frequency column/ frekwensiekolom ✓ cumulative frequency column/kumulatiewe frekwensiekolom	(2)
	$10 \leq x < 20$	2	2		
	$20 \leq x < 30$	3	5		
	$30 \leq x < 40$	4	9		
	$40 \leq x < 50$	6	15		
	$50 \leq x < 60$	5	20		
	$60 \leq x < 70$	4	24		
	$70 \leq x < 80$	6	30		
	TOTAL/TOTAAL	30			
1.2					

Ogive/Ogief

Cumulative Frequency/Kumulatiewe Frekwensie

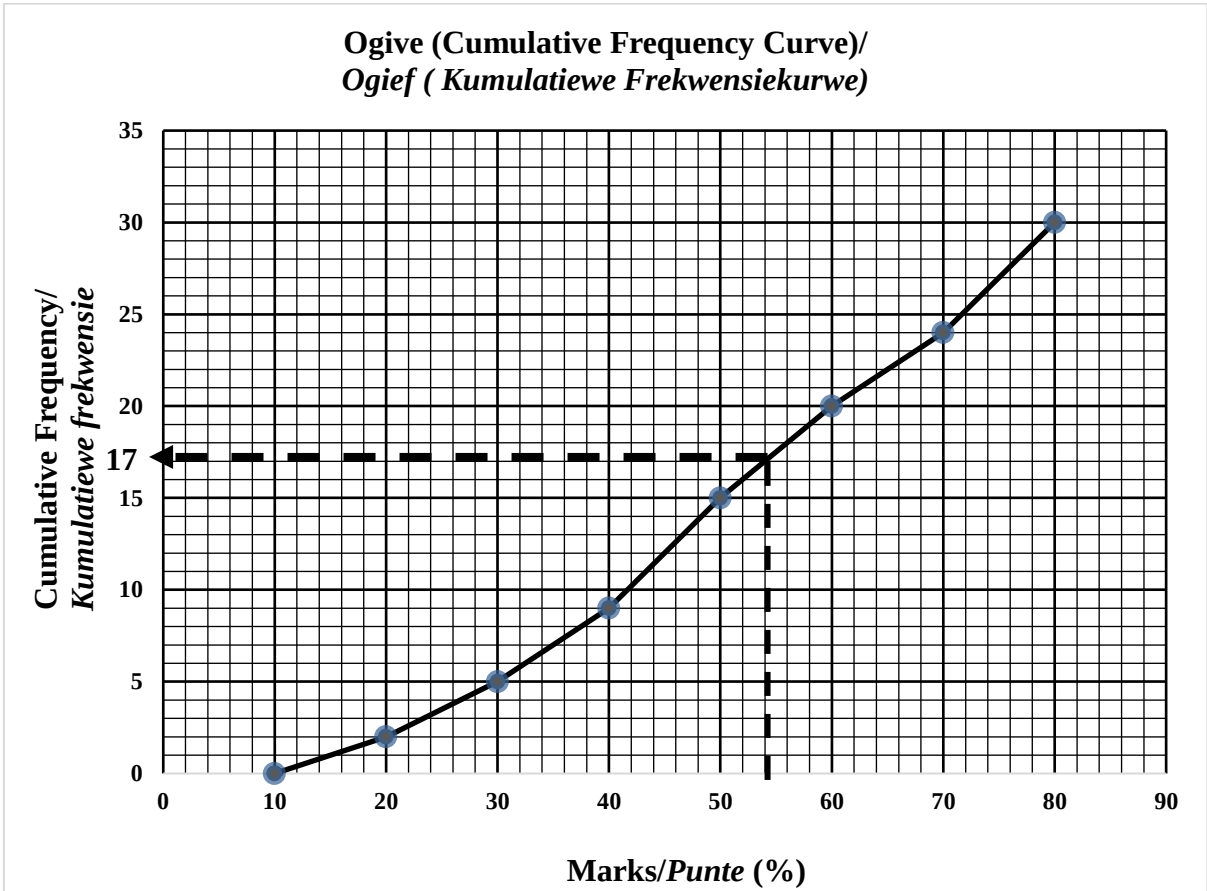
Marks/Punte (%)

✓ ground point & ending point/
Grond begin en eindpunt

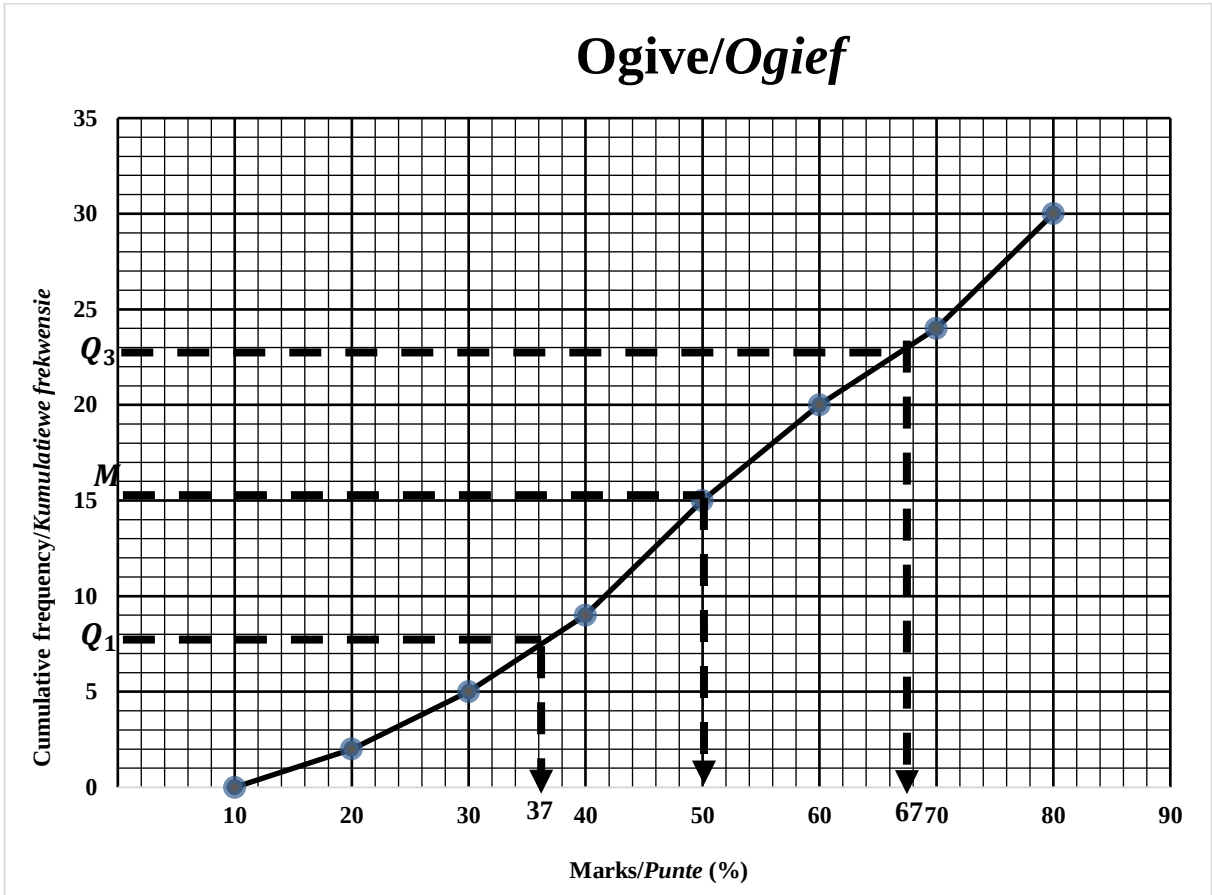
✓ six remaining points plotted correctly/
ander ses punte reg geplot

✓ shape/
vorm

(3)



1.3	Approximately 17 learners obtained 54%/ <i>Ongeveer 17 leerders behaal 54%</i> ∴ No of learners obtained 54% of more/ <i>Aantal leerders wat 54% of meer behaal het = 30 – 17</i> <i>= 13</i> Answer only: Full marks <i>Slegs Antwoord: Volpunte</i> NOTES – Accept the following range: • Approximately 16 – 18 learners • No of learners: 12 – 14 NOTAS-Aanvaar die volgende: • <i>Ongeveer 16 – 18 leerders</i> • <i>Aantal leerders: 12- 14</i>	✓ 17 ✓ 13	(2)
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1.4	Lower quartile/Onderste kwartiel = 37 % (accept/aanvaar 36 – 38) Median/Mediaan = 50 % (accept/aanvaar 50 – 51) Upper quartile/Boonste kwartiel = 67% (accept/aanvaar 66 – 68) Range = Max – Min/Omvang = Maks - Min 66% = Max/Maks – 12 % ∴ Max/Maks = 78% Min = 12%	✓ lower quartile/ onderste kwartiel ✓ median/mediaan ✓ upper quartile/ boonste kwartiel ✓ whiskers/snor	(4)
	MARKS (%)		
			[11]

QUESTION/VRAAG 2

	SOLUTIONS/OPLOSSINGS	Mark descriptions/ Punt omskrywing	Marks/ Punte
2.1.1	$a = 55,96$ $b = 22,81$ $\therefore \hat{y} = 55,96 + 22,81x$ Answer only: Full marks Slegs Antwoord: Volpunte	✓ value of a/waarde van a ✓ value of b/waarde van b ✓ equation/vergelyking	(3)
2.1.2	SEE THE DIAGRAM BELOW/ SIEN DIE DIAGRAM HIERONDER	✓ any correct 2 points enige 2 punte korrek ✓ straight line joining the points for $x \in [5 ; 29]$/ reguitlyn wat die punte verbind vir $x \in [5 ; 29]$	(2)

Scatter Plot/Spreidiagram

The scatter plot displays a positive linear correlation between depth and pressure. The x-axis represents depth in feet (ft) and deimeters (vt), ranging from 0 to 35 with major grid lines every 5 units and minor grid lines every 1 unit. The y-axis represents pressure in kilopascals (kPa), ranging from 0 to 900 with major grid lines every 100 units and minor grid lines every 20 units. There are 12 data points plotted. A line of best fit is drawn through the points, starting at approximately (5, 180) and ending at (30, 750). One data point is explicitly labeled with its coordinates: (17,8; 462).

Depth (ft)	Pressure (kPa)
5	210
8	290
12	340
14	330
17,8	462
18	410
20	460
21	450
24	610
27	740
29	780

Line must be sketched within the domain in future, no penalty given for this session if a candidate extended the line. *Lyn moet in die toekoms slegs binne in die omvang geteken word, geen penaliseering sal gegee word in hierdie sessie as 'n leerder die lyn verleng het nie.*

2.1.3	$r = 0,96$	✓ answer/antwoord	(1)
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NSC – Marking Guidelines/Nasienriglyne

NOTE/NOTA:

- If a candidate answers a question TWICE, only mark the FIRST attempt/ *As 'n kandidaat 'n vraag twee keer beantwoord, merk slegs die EERSTE poging.*
- Consistent Accuracy applies in all aspects of the marking guidelines/ *Konsekwente akkuraatheid is van toepassing in alle aspekte van die nasienriglyne*

QUESTION 1 / VRAAG 1																									
1.1.1	130g × 2000 = 260 000 g = 260 kg		✓answer / <i>antwoord</i>	(1)																					
1.1.2	Distributor D. The standard deviation is the smallest and the average grams per packet is the closest to 130g / <i>Verspreider D. Die standaardafwyking is die kleinste en die gemiddelde gram per pakkie is die naaste aan 130g</i>		✓D ✓reason / <i>rede</i>	(2)																					
1.1.3	Distributor A. Even when the packets are filled above the standard deviation of the mean, they do not fill it up to the recommended grams / <i>Verspreider A. Selfs wanneer die pakkies bo die standaardafwyking van die gemiddelde gevul word, vul hulle dit nie tot die aanbevole gram nie</i>		✓A ✓reason / <i>rede</i>	(2)																					
1.2.1	Range / <i>Waardeversameling</i> = 58 – 9 = 49		✓answer / <i>antwoord</i>	(1)																					
1.2.2	<table><tr><th>Interval</th><th>Frequency <i>Frekwensie</i></th><th>Cumulative Frequency <i>Kumulatiewe Frekwensie</i></th></tr><tr><td>0 < x ≤ 10</td><td>3</td><td>3</td></tr><tr><td>10 < x ≤ 20</td><td>15</td><td>18</td></tr><tr><td>20 < x ≤ 30</td><td>27</td><td>45</td></tr><tr><td>30 < x ≤ 40</td><td>45</td><td>90</td></tr><tr><td>40 < x ≤ 50</td><td>38</td><td>128</td></tr><tr><td>50 < x ≤ 60</td><td>12</td><td>140</td></tr></table>		Interval	Frequency <i>Frekwensie</i>	Cumulative Frequency <i>Kumulatiewe Frekwensie</i>	0 < x ≤ 10	3	3	10 < x ≤ 20	15	18	20 < x ≤ 30	27	45	30 < x ≤ 40	45	90	40 < x ≤ 50	38	128	50 < x ≤ 60	12	140	✓45 ✓140	(2)
Interval	Frequency <i>Frekwensie</i>	Cumulative Frequency <i>Kumulatiewe Frekwensie</i>																							
0 < x ≤ 10	3	3																							
10 < x ≤ 20	15	18																							
20 < x ≤ 30	27	45																							
30 < x ≤ 40	45	90																							
40 < x ≤ 50	38	128																							
50 < x ≤ 60	12	140																							

NSC – Marking Guidelines/Nasienriglyne

1.2.3	Fish caught in competition	✓grounding / <i>anker</i> ✓use cumulative freq / <i>gebruik kumulatiewe</i> <i>frekwensie</i> ✓shape / <i>vorm</i>	(3)
1.2.4	$60\% \times 140 = 84$ $x < 39$ [accept / <i>aanvaar</i> 37 – 39]	✓84 ✓answer / <i>antwoord</i>	(2)
			[13]
QUESTION 2 / VRAAG 2			
2.1	$\bar{x} = \frac{232}{10} = 23,2$	✓232 ✓answer / <i>antwoord</i>	(2)
2.2	$a = 19,86 \quad b = 1,22$ $y = 19,86 + 1,22x$	✓19,86 ✓1,22 ✓equation / <i>vergelyking</i>	(3)
2.3	$y = 19,86 + 1,22(29) = 55,24 \text{ min}$	✓substitute / <i>vervang</i> ✓answer / <i>antwoord</i>	(2)
			[7]

NOTE:

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

QUESTION 1		
	Scatter plot	✓ y-intercept ✓ passing through mean pt (3,2; 74,67)) (2)
1.1	$A = 90,375$ $B = -4,875$ $\hat{y} = 90,38 - 4,88x$	✓ value of A ✓ value of B ✓ equation (3)
1.2	$r = -0,80$	✓ answer (1)
1.3	Negative strong correlation	✓ negative ✓ strong (2)
1.4	$52 = 90,38 - 4,88x$ $x = 7,86$ 8 days	✓ $52 = 90,38 - 4,88x$ ✓ $x = 7,86$ (2)
1.5	The answer is reliable since there is a strong negative correlation.	✓ Reliable ✓ Explanation (2)
		[10]

QUESTION 2

2.1	<table><tr><th>Marks</th><th>Frequency</th><th>Cumulative frequency</th></tr><tr><td>$0 < x \leq 10$</td><td>20</td><td>20</td></tr><tr><td>$10 < x \leq 20$</td><td>40</td><td>60</td></tr><tr><td>$20 < x \leq 30$</td><td>60</td><td>120</td></tr><tr><td>$30 < x \leq 40$</td><td>50</td><td>170</td></tr><tr><td>$40 < x \leq 50$</td><td>20</td><td>190</td></tr><tr><td>$50 < x \leq 60$</td><td>10</td><td>200</td></tr><tr><td></td><td>$n = 200$</td><td></td></tr></table>	Marks	Frequency	Cumulative frequency	$0 < x \leq 10$	20	20	$10 < x \leq 20$	40	60	$20 < x \leq 30$	60	120	$30 < x \leq 40$	50	170	$40 < x \leq 50$	20	190	$50 < x \leq 60$	10	200		$n = 200$		✓ 20 ✓ Other vales (2)
Marks	Frequency	Cumulative frequency																								
$0 < x \leq 10$	20	20																								
$10 < x \leq 20$	40	60																								
$20 < x \leq 30$	60	120																								
$30 < x \leq 40$	50	170																								
$40 < x \leq 50$	20	190																								
$50 < x \leq 60$	10	200																								
	$n = 200$																									
2.2	200	✓ answer (1)																								
2.3	Cumulative frequency curve of mathematics results	✓ All points ✓ Shape ✓ Grounding (3)																								
2.4	$200 - 60$ $= 140$	✓ 60 ✓ 140 (2)																								
2.5	$\bar{x} = \frac{(5 \times 20) + (15 \times 40) + (25 \times 60) + (35 \times 50) \dots + (55 \times 10)}{200}$ $= \frac{5400}{200}$ $= 27$	✓ midpoints ✓ sum ✓ Answer (3)																								
		[11]																								

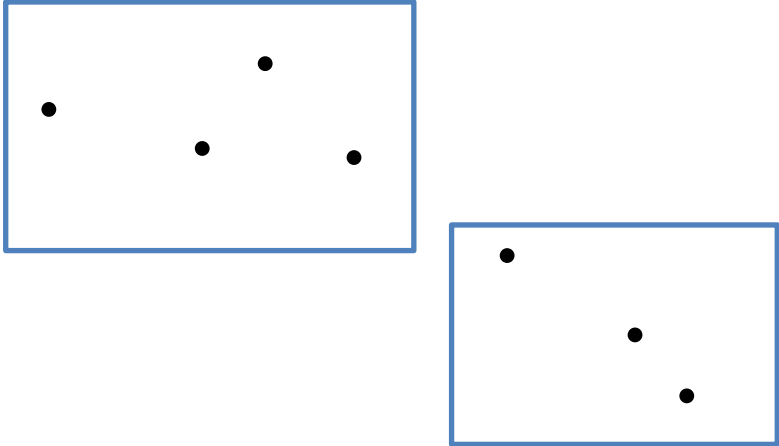
GEOMETRY • MEETKUNDE	
S	A mark for a correct statement (A statement mark is independent of a reason)
	'n Punt vir 'n korrekte bewering ('n Punt vir 'n bewering is onafhanklik van die rede)
R	A mark for the correct reason (A reason mark may only be awarded if the statement is correct)
	'n Punt vir 'n korrekte rede ('n Punt word slegs vir die rede toegeken as die bewering korrek is)
S/R	Award a mark if statement AND reason are both correct
	Ken 'n punt toe as die bewering EN rede beide korrek is

QUESTION 1 / VRAAG 1

1.1.1	$\bar{x} = \frac{27 + 36 + \dots + 96 + 104}{10}$ $= \frac{649}{10}$ $= 64,9$ AO full marks	✓ Sum of weights ✓ Answer Accept 65	(2)
1.1.2	$\sigma = 23,86$	✓✓ Answer	(2)
1.1.3	1.1.1 if learner uses 64,9 points:/ 1.1.1 as leerder 64,9 punte gebruik: $\bar{x} + \sigma = 88,76$ $\bar{x} - \sigma = 41,04$ There are 6 values within one standard deviation from the mean. / Daar is 6 waardes binne een standaardafwyking van die gemiddelde. OR/ OF CA from 1.1.1 if learner uses 65 points:/ CA vanaf 1.1.1 as leerder 65 punte gebruik: $\bar{x} + \sigma = 88,86$ $\bar{x} - \sigma = 41,14$ There are 6 values within one standard deviation from the mean. / Daar is 6 waardes binne een standaardafwyking van die gemiddelde.	✓ 88,76 ✓ 41,04 ✓ 6 ✓ 88,86 ✓ 41,14 ✓ 6	(3)

1.2.1	Skewed to the left/ negatively skewed <i>Skeef na links/ negatief skeef</i> $\bar{x} < \text{median} / Q_2$ OR The data is more spread out between Q_1 and Q_2 than between Q_2 and Q_3. OR Or any similar answer	✓ Answer ✓ Reason	(2)
			[9]

QUESTION 2 / VRAAG 2

2.1	SCATTER DIAGRAM OF LATITUDE LINES AND THE AVERAGE MAXIMUM TEMPERATURES FOR APRIL AVERAGE MAXIMUM TEMPERATURE (°C)  LATITUDE (DEGREES)	✓ first 4 coordinates ✓ last 3 coordinates (If learner connected dots, panelise 1 mark.)	(2)
2.2	$\hat{y} = a + bx$ $a = 40,27$ $b = -0,51$ $y = 40,27 - 0,51x$	✓ a ✓ b ✓ Equation	(3)
2.3	$y = 40,27 - 0,51x$ $y = 40,27 - 0,51(40)$ $y = 19,87$ AO full marks Accept 19,85 (Calculator)	✓ Subst. ✓ Answer Accept 20	(2)
2.4	$r = -0,91$ The correlation is very strong negative. / <i>Die korrelasie is baie sterk negatief.</i>	✓ r ✓ Strong ✓ Negative	(3)
			[10]

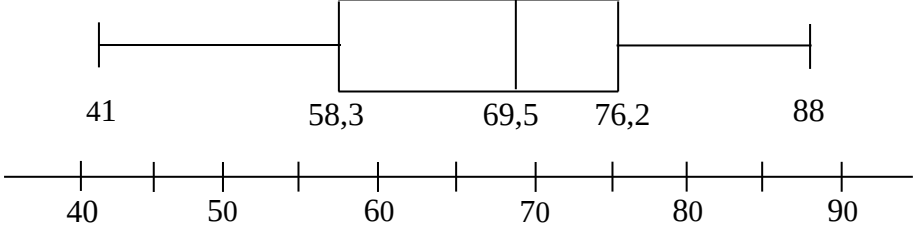
- NOTE:**
- If a candidate answers a question TWICE, only mark the FIRST attempt.
 - If a candidate has crossed out an attempt of a question and not redone the question, mark the crossed-out version.
 - Consistent accuracy applies in ALL aspects of the Marking Guidelines. Stop marking at the second calculation error.
 - Assuming answers/values in order to solve a problem is NOT acceptable.

GEOMETRY	
S	A mark for a correct statement (A statement mark is independent of a reason)
R	A mark for the correct reason (A reason mark may only be awarded if the statement is correct)
S/R	Award a mark if statement AND reason are both correct.

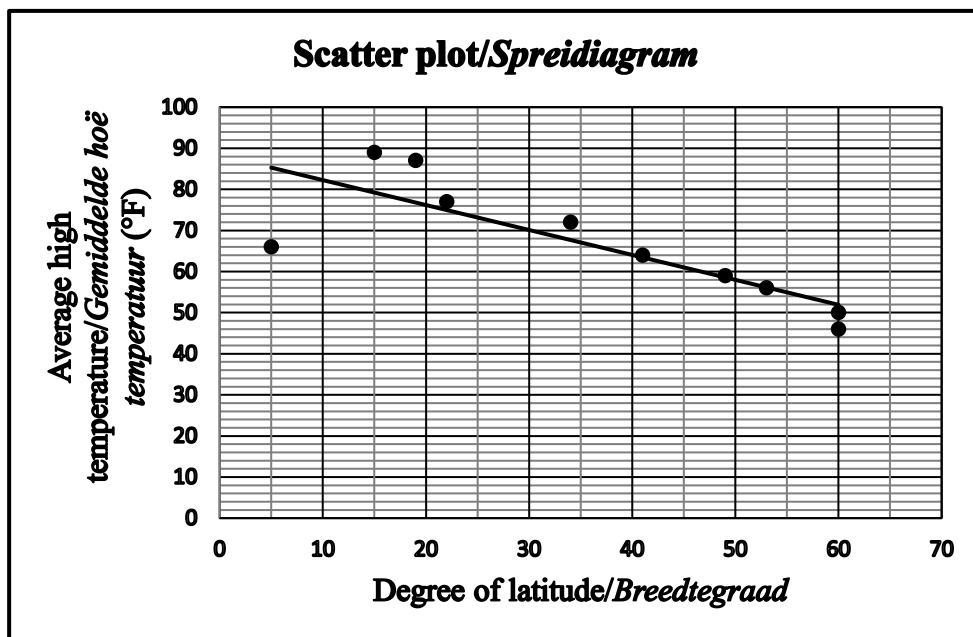
QUESTION 1

1.1	$a = 169,60$ $b = -0,90$ $\hat{y} = 169,60 - 0,90x$ Answer only: Full marks	✓A value of a ✓A value of b ✓CA answer (3)
1.2	$r = -0,93$	✓A answer (1)
1.3	A strong negative correlation	✓CA answer (1)
1.4	$y = 169,60 - 0,90(33)$ $y = 139,90 \text{ m}$ $y \approx 140 \text{ m}$ Answer only: Full marks	✓CA substitution ✓CA answer (2)
1.5	$-0,90 \times 15 = -13,50$ Decrease in legibility distance per 15 years $\approx 14 \text{ m}$ Penalise only once for incorrect rounding: Only in question 1.4 or 1.5.	✓CA substitution ✓CA answer (2)
[9]		

QUESTION 2

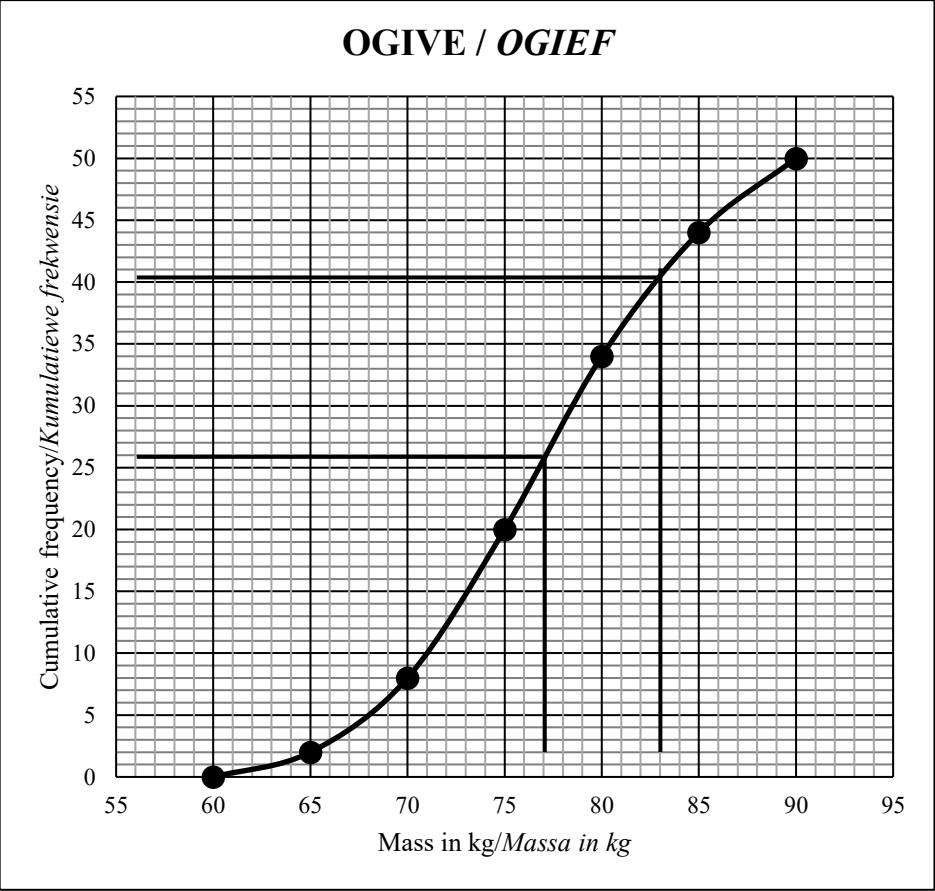
2.1		✓A minimum and maximum ✓A Q_2 (accept 69 – 70) ✓A Q_1 (accept 58 – 58,5) and Q_3 (accept 75,5 – 76,5) (3)
2.2	skewed to the left	✓CA answer (1)
2.3	skewed to the left	✓CA answer (1)
2.4.1	12,63	✓A answer (1)
2.4.2	mean = 63,93 $(\text{mean} - \sigma; \text{mean} + \sigma) = (51,30; 76,56)$ 6 trees have heights outside 1 standard deviation from the mean	✓A mean ✓CA $\text{mean} - \sigma$ ✓CA $\text{mean} + \sigma$ ✓CA answer (4)
[10]		

QUESTION/VRAAG 1



1.1	Strong negative correlation/ <i>Sterk negatiewe korrelasie</i> Data points are close to the regression line/ <i>Data punte lê naby regressielyn.</i>								✓ strong/ <i>sterk</i> ✓ reason/ <i>rede</i>			(2)																					
<table><tr><td>Latitude in degrees/ <i>Beedtegraad</i></td><td>5</td><td>19</td><td>34</td><td>53</td><td>22</td><td>41</td><td>60</td><td>15</td><td>60</td><td>49</td></tr><tr><td>Average high temperature/<i>Gemiddelde hoë temperatuur (in °F)</i></td><td>66</td><td>87</td><td>72</td><td>56</td><td>77</td><td>64</td><td>46</td><td>89</td><td>50</td><td>59</td></tr></table>												Latitude in degrees/ <i>Beedtegraad</i>	5	19	34	53	22	41	60	15	60	49	Average high temperature/ <i>Gemiddelde hoë temperatuur (in °F)</i>	66	87	72	56	77	64	46	89	50	59
Latitude in degrees/ <i>Beedtegraad</i>	5	19	34	53	22	41	60	15	60	49																							
Average high temperature/ <i>Gemiddelde hoë temperatuur (in °F)</i>	66	87	72	56	77	64	46	89	50	59																							
1.2	$a = 88,33$ $b = -0,61$ $\hat{y} = 88,33 - 0,61x$ Answer only: Full Marks/ <i>Slegs antwoord: Volpunte</i>								✓ a ✓ b ✓ eq/vgl			(3)																					
1.3	$y = 88,33 - 0,61(28)$ $= 71,25^{\circ}\text{F}$ OR/OF $y = 71,33^{\circ}\text{F}$ (calc/sakr) OR/OF From Diagram: 71-72								✓ subst ✓ answ/ <i>antw</i>			(2)																					
									✓✓ answ/ <i>antw</i>			(2)																					
1.4	$\sigma_y = 13,9^{\circ}\text{F}$								✓ answ/ <i>antw</i>			(1)																					
1.5	$\bar{y} = 66,6$ $66,6 + 13,9 = 80,5$ $\therefore$ 2 Cities / <i>Stede</i> CA: From 1.4 if learner used $\sigma_x = 18,77$ $35,8 + 18,77 = 54,58$ 2 cities (3/3)								✓ mean ✓ mean + σ_y ✓ answ/ <i>antw</i>			(3)																					
												[11]																					

QUESTION/VRAAG 2

2.1	$k = 44$ $f = 6$	✓ k ✓ f (2)
2.2	OGIVE / OGIEF 	✓ (60 ; 0) ✓ (90 ; 50) ✓ S-curve/- kurwe (3)
2.3	M = 77 kg (accept: 76 – 78 kg) CA from OGIVE/ van OGIEF	✓ CF = 25 ✓ answ/antw (2)
2.4	(83 ; ± 40) (accept: 39 – 41) $\therefore \frac{10}{50} \times 100 = 20\%$	✓ CF ✓ % (2)
		[9]

QUESTION/VRAAG 1

AMOUNT/ BEDRAG (R)	FREQUENCY/ FREKWENSIE
$0 \leq x < 1000$	8
$1000 \leq x < 2000$	12
$2000 \leq x < 3000$	P
$3000 \leq x < 4000$	30
$4000 \leq x < 5000$	Q
$5000 \leq x < 6000$	12

1.1	20	✓ answer/antwoord (1)																					
1.2	$8 + 12 + P + 30 + Q + 12 = 100$ $P + Q = 38 \dots\dots\dots \textcircled{1}$ $\bar{x} = 3240 = \frac{8(500) + 12(1500) + P(2500) + 30(3500) + Q(4500) + 12(5500)}{100}$ $\therefore 1310 = 25P + 45Q$ $\therefore 262 = 5P + 9Q$ $5(38 - Q) + 9P = 262$ $190 - 5Q + 9Q = 262$ $4Q = 72$ $Q = 18$ $P = 20$	✓ $P + Q = 38$ ✓ eq of $\bar{x} = 3240$ ✓ $262 = 5P + 9Q$ ✓ subst/vervang $\textcircled{1}$ ✓ subst/vervang $Q = 18$ (5)																					
1.3	<table border="1"> <thead> <tr> <th>AMOUNT/ BEDRAG (R)</th><th>FREQUENCY/ FREKWENSIE</th><th>CUMULATIVE FREQUENCY/ KUMULATIEWE FREKWENSIE</th></tr> </thead> <tbody> <tr> <td>$0 \leq x \leq 1000$</td><td>8</td><td>8</td></tr> <tr> <td>$1000 \leq x \leq 2000$</td><td>12</td><td>20</td></tr> <tr> <td>$2000 \leq x \leq 3000$</td><td>20</td><td>40</td></tr> <tr> <td>$3000 \leq x \leq 4000$</td><td>30</td><td>70</td></tr> <tr> <td>$4000 \leq x \leq 5000$</td><td>18</td><td>88</td></tr> <tr> <td>$5000 \leq x \leq 6000$</td><td>12</td><td>100</td></tr> </tbody> </table>	AMOUNT/ BEDRAG (R)	FREQUENCY/ FREKWENSIE	CUMULATIVE FREQUENCY/ KUMULATIEWE FREKWENSIE	$0 \leq x \leq 1000$	8	8	$1000 \leq x \leq 2000$	12	20	$2000 \leq x \leq 3000$	20	40	$3000 \leq x \leq 4000$	30	70	$4000 \leq x \leq 5000$	18	88	$5000 \leq x \leq 6000$	12	100	✓ 8, 20, 40 ✓ 70, 88, 100 (2)
AMOUNT/ BEDRAG (R)	FREQUENCY/ FREKWENSIE	CUMULATIVE FREQUENCY/ KUMULATIEWE FREKWENSIE																					
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$5000 \leq x \leq 6000$	12	100																					

1.4	Ogive/Ogief	✓ min/max values ✓ all coordinates (penalise without grouping/penaliseer sonder beginpunt) ✓ Shape/Vorm (3)
1.5	$100 - 74 = 26$ members/lede • Possibility of an interval $\{73 - 75\}$ CA from graph	✓ answer/antwoord (1)
[12]		

QUESTION/VRAAG 2

COUPLE/PAAR	1	2	3	4	5	6	7	8
JUDGE/BEOORDELAAR 1	18	4	6	8	5	12	10	14
JUDGE/BEOORDELAAR 2	15	6	3	5	5	14	8	15

2.1	$a = -0.03$ $b = 0,93$ $\hat{y} = -0.03 + 0,93x$	Answer only: full marks, but if a and b are swapped only 1/3 marks/ <i>Slegs antwoord: vol punte maar as a en b omgeruil is, slegs 1/3 punte.</i>	✓ a ✓ b ✓ equation/ vergelyking (3)
2.2	$\hat{y} = -0.03 + 0,93(15)$ $= 13,92$ OR / OF $13,85$ ≈ 14 CA from 2.1	Answer only: full marks <i>Slegs antwoord: vol punte</i>	✓ substitute 15 into eq. / vervang 15 in vgl. ✓ answer/antwoord (2)
2.3	Yes, they are consistent. $r = 0.9$ – positive strong correlation / <i>Ja, hulle is konsekwent. $r = 0.9$ – positief sterk korrelasie</i>		✓ yes/ja ✓ $r = 0,9$ ✓ positive strong/ positief sterk (3)