

STATISTICS

Solutions

DBE's own marking guidelines, in booklet order

Every solution here is a clip of the official DBE marking guideline published with the paper the question came from. The working, the mark ticks and the accepted alternatives are DBE's. Nothing has been rewritten or re-derived.

The numbers match the question booklet: solution 34 answers question 34, and the chapters are in the same order.

DBE writes one guideline for both languages, so these pages are bilingual and their marking notes are largely in English. That is DBE's own page, reproduced as printed.

A marking guideline is written for markers, not learners. It shows the shortest route to the marks, so where a step looks compressed, that is the guideline being terse rather than a step missing.

1. Glasses of water a day, from a frequency table

Official DBE marking guideline · November 2023 · Q2 · 8 marks

QUESTION/VRAAG 2

2.1	<table border="1"> <thead> <tr> <th>Number of glasses of water per day</th><th>Number of staff members</th><th>Cumulative frequency</th></tr> </thead> <tbody> <tr> <td>$0 \leq x < 2$</td><td>5</td><td>5</td></tr> <tr> <td>$2 \leq x < 4$</td><td>15</td><td>20</td></tr> <tr> <td>$4 \leq x < 6$</td><td>13</td><td>33</td></tr> <tr> <td>$6 \leq x < 8$</td><td>5</td><td>38</td></tr> <tr> <td>$8 \leq x < 10$</td><td>2</td><td>40</td></tr> </tbody> </table>	Number of glasses of water per day	Number of staff members	Cumulative frequency	$0 \leq x < 2$	5	5	$2 \leq x < 4$	15	20	$4 \leq x < 6$	13	33	$6 \leq x < 8$	5	38	$8 \leq x < 10$	2	40	✓ 5; 20 ✓ 40 (2)
Number of glasses of water per day	Number of staff members	Cumulative frequency																		
$0 \leq x < 2$	5	5																		
$2 \leq x < 4$	15	20																		
$4 \leq x < 6$	13	33																		
$6 \leq x < 8$	5	38																		
$8 \leq x < 10$	2	40																		
2.2	40 staff members	✓ answer (1)																		
2.3	33 staff members	✓ answer (1)																		
2.4	$\bar{x} = \frac{\left(1 \times \left(5 + \frac{k}{2}\right)\right) + (3 \times 15) + \left(5 \times \left(13 + \frac{k}{2}\right)\right) + (7 \times 5) + (9 \times 2)}{40 + k} = 4$ $5 + \frac{k}{2} + 45 + 65 + \frac{5k}{2} + 35 + 18 = 160 + 4k$ $3k + 168 = 160 + 4k$ $k = 8$ OR $\bar{x} = \frac{(1 \times 5) + (15 \times 3) + (13 \times 5) + (5 \times 7) + (2 \times 9)}{40}$ $= 4,2$ $\bar{x}_{\text{old}} - \bar{x}_{\text{current}} = 4,2 - 4$ $= 0,2$ $\therefore 0,2 \times 40$ $= 8 \text{ teachers}$	✓ answer from Q2.2 + k ✓ $\left(1 \times \left(5 + \frac{k}{2}\right)\right)$ ✓ $\left(5 \times \left(13 + \frac{k}{2}\right)\right)$ ✓ answer (4) ✓ 4,2 ✓ $\bar{x}_{\text{old}} - 4$ ✓ difference ✓ answer (4)																		
		[8]																		

2. Fifteen insurance premiums: the mean, then the spread

Official DBE marking guideline · May/June 2025 · Q1 · 9 marks

QUESTION/VRAAG 1

134	215	325	326	362	429	515	531	598	610	624	728	923	1 034	1 200
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1.1	$\bar{x} = \frac{8554}{15}$ $= 570,27$	✓ 8554 ✓ answer (2)
1.2	$\sigma = 291,03$	✓ 291,03 (1)
1.3	$(279,24 ; 861,3)$ $\therefore 10$ premiums	✓ $(\bar{x} - \sigma ; \bar{x} + \sigma)$ ✓ answer (2)
1.4	$\frac{\left(1791 \times \frac{118}{100}\right) + \left(6763 \times \frac{k+100}{100}\right)}{15} = 686,44$ $6763 \times \frac{k+100}{100} = 8183,22$ $\frac{k+100}{100} = 1,209...$ $k+100 = 120,999...$ $k = 21\%$	✓ $1791 \times \frac{118}{100}$ ✓ $6763 \times \frac{k+100}{100}$ ✓ $\frac{\text{sum of new premiums}}{15} = 686,44$ ✓ answer (4)
		[9]

3. Loaves of bread over 18 days, and the values that sit far out

Official DBE marking guideline · November 2021 · Q1 · 10 marks

QUESTION/VRAAG 1

10	11	13	14	14	15	16	18	18
19	19	20	21	35	35	37	40	41

1.1.1	$\bar{x} = \frac{396}{18}$ $\bar{x} = 22$	Answer only: Full marks Slegs antw: Volpunte	✓ 396 ✓ answer (2)
1.1.2	$\sigma = 10,1707 \approx 10,17$		✓ answer (1)
1.1.3	$\bar{x} + \sigma = 32,17$ $\therefore 5$ days		✓ 32,17 ✓ 5 (2)
1.2	$22 \times 18 = 396$ ordered/ <i>bestel</i> $20 \times 18 = 360$ sold/ <i>verkoop</i> Total not sold/ <i>Totaal nie verkoop nie</i> : 36 OR/OF $22 - 20 = 2$ $2 \times 18 = 36$		✓ $18\bar{x}_1$ and $18\bar{x}_2$ ✓ answer (2) ✓ $\bar{x}_1 - \bar{x}_2$ ✓ answer (2)
1.3.1	Option B/ <i>Opsie B</i> <u>Any one of the following reasons/<i>Enige een van die vlg redes</i>:</u> - Median/<i>Mediaan</i> = 18,5 $Q_1 = 14$ - IQR = 21 - Mean > Median, therefore the data is skewed to the right		✓ B ✓ reason (2)
1.3.2	Data is positively skewed/skewed to the right <i>Data is positief skeef/skeef na regs</i>		✓ answer (1)
[10]			

4. Fifteen days of mobile data: the mean, then the standard deviation

Official DBE marking guideline · May/June 2021 · Q1 · 14 marks

QUESTION/VRAAG 1

1.1

26	13	3	18	12	34	24	58	16	10	15	69	20	17	40
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1.1.1(a)	$\bar{x} = \frac{375}{15}$ $\bar{x} = 25 \text{ MB}$ Answer only: Full marks	✓ 375 ✓ answer (2)
1.1.1(b)	$\sigma = 17,65 \text{ MB}$	✓ answer (1)
1.1.2	$25 + 17,65 = 42,65$ $\therefore 2 \text{ days}$	✓ 42,65 ✓ 2 (2)
1.1.3	Overall $\bar{x} = \frac{80}{100} \times 25$ $= 20 \text{ MB}$ $\frac{375 + x}{30} = 20$ $x = 600 - 375$ $= 225$ maximum total amount of data that Sam must use for the remainder of the month: 225 MB	✓ Overall $\bar{x} = 20$ ✓ $\frac{375 + x}{30} = 20$ ✓ answer (3)

1.2

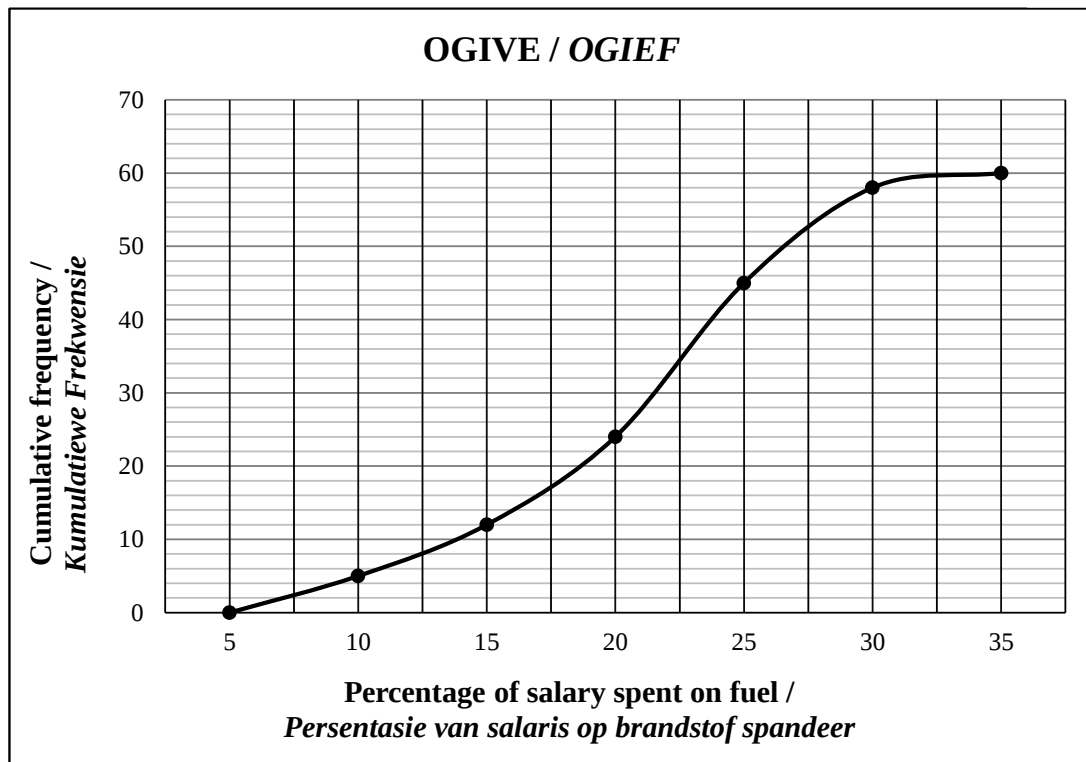
Wind speed in km/h (x)	2	6	15	20	25	17	11	24	13	22
Temperature in °C (y)	28	26	22	22	16	20	24	19	26	19

1.2.1	$a = 29,35$ $b = -0,46$ $\hat{y} = 29,35 - 0,46x$	✓ a ✓ b ✓ equation (3)
1.2.2	$y = 25,20 \text{ °C}$ (calculator) OR $\hat{y} = 29,35 - 0,46(9)$ $y = 25,21 \text{ °C}$	✓✓ answer (2) ✓ substitution ✓ answer (2)
1.2.3	$b < 0$, indicating that as the wind speed increases the temperature decreases.	✓ interpretation (1)
[14]		

5. An ogive of what employees spend on fuel

Official DBE marking guideline · November 2022 · Q2 · 8 marks

QUESTION/VRAAG 2



2.1	60 employees	✓ answer (A)	(1)
2.2	$20 < x \leq 25$	✓ answer	(1)
2.3	$60 - 34$ $= 26$ employees ANSWER ONLY: Full marks	✓ 34 ✓ answer	(2)
2.4	Salary = $\frac{100}{7} \times 2400$ Salary = R34 285,71 ANSWER ONLY: Full marks	✓ method ✓ answer	(2)
2.5	$\therefore$ Ogive/Cumulative frequency graph will shift to the right/will become steeper. $\therefore$ Ogief/Kumulatiewe frekwensie grafiek sal na regs skuif/sal steiler wees.	✓✓ answer	(2)
			[8]

6. Days absent, grouped: the modal class and an estimated mean

Official DBE marking guideline · May/June 2021 · Q2 · 9 marks

QUESTION/VRAAG 2

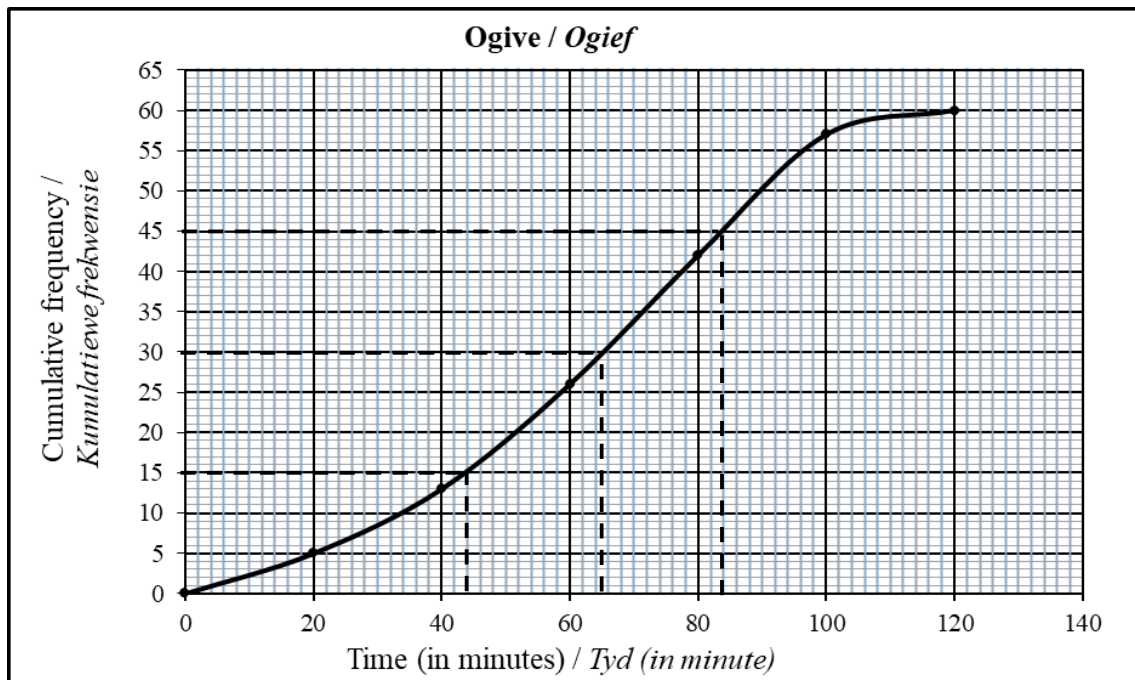
Number of days absent	Number of learners	Cumulative frequency
$0 \leq x < 5$	34	34
$5 \leq x < 10$	45	79
$10 \leq x < 15$	98	177
$15 \leq x < 20$	43	220
$20 \leq x < 25$	7	227
$25 \leq x < 30$	3	230

2.1	Modal class: $10 \leq x < 15$	✓ answer (1)
2.2	177 learners	✓ answer (1)
2.3	230 learners	✓ answer (1)
2.4	Ogive	✓ grounding at (0; 0) ✓ shape ✓ upper limits ✓ All other points correct (4)
2.5	The median is at position 115. ☐ value of median is 12 days (accept 11 – 14) Answer only: Full marks	✓ reading off at 115 ✓ answer (2)
[9]		

7. Sixty travel times on one ogive, then a rule about working from home

Official DBE marking guideline · November 2024 · Q2 · 10 marks

QUESTION/VRAAG 2



2.1	Median = 65	✓ 65 (1)
2.2	$Q_1 = 44$	✓ 44 (1)
2.3	$IQR = 84 - 44$ $= 40$	✓ 84 ✓ IQR (2)
2.4		✓ box ✓ (A) whiskers ending at 5 & 120 (2)
2.5	Number of employees who qualify = 34 $\% \text{ of employees who qualify} = \frac{34}{60} \times 100$ $= 56,67\% \text{ of the employees}$ OR/OF Number of employees who qualify = 35 $\% \text{ of employees who qualify} = \frac{35}{60} \times 100$ $= 58,33\% \text{ of the employees}$	✓ 34 ✓ answer ✓ 35 ✓ answer (2)
2.6	Number of intervals = 3 Time allowed to work from home = 3(30 minutes) $= 90 \text{ minutes OR/OF } 1,5 \text{ hours}$	✓ 3 ✓ answer (2)
[10]		

8. How far fifty athletes travel to reach a training facility

Official DBE marking guideline · May/June 2024 · Q2 · 11 marks

QUESTION/VRAAG 2

2.1	<table border="1"> <thead> <tr> <th>Distance (x km)</th><th>Frequency</th><th>Cumulative frequency</th></tr> </thead> <tbody> <tr> <td>$0 \leq x < 5$</td><td>3</td><td>3</td></tr> <tr> <td>$5 \leq x < 10$</td><td>7</td><td>10</td></tr> <tr> <td>$10 \leq x < 15$</td><td>20</td><td>30</td></tr> <tr> <td>$15 \leq x < 20$</td><td>12</td><td>42</td></tr> <tr> <td>$20 \leq x < 25$</td><td>5</td><td>47</td></tr> <tr> <td>$25 \leq x < 30$</td><td>3</td><td>50</td></tr> </tbody> </table>	Distance (x km)	Frequency	Cumulative frequency	$0 \leq x < 5$	3	3	$5 \leq x < 10$	7	10	$10 \leq x < 15$	20	30	$15 \leq x < 20$	12	42	$20 \leq x < 25$	5	47	$25 \leq x < 30$	3	50	✓ 10 ✓ all values correct (2)
Distance (x km)	Frequency	Cumulative frequency																					
$0 \leq x < 5$	3	3																					
$5 \leq x < 10$	7	10																					
$10 \leq x < 15$	20	30																					
$15 \leq x < 20$	12	42																					
$20 \leq x < 25$	5	47																					
$25 \leq x < 30$	3	50																					
2.2	Ogive/Ogief	✓ grounding ✓ plotting a min of 3 points (cf at upper limits) ✓ smooth, increasing curve (3)																					
2.3	$Q_3 = 17,8$ $Q_1 = 11$ $IQR = 6,8$	✓ Q_3 (accept between 17-19) and Q_1 (accept between 10-12,5) ✓ answer (accept 5-9) (2)																					

2.4	$5 \leq x < 10$	✓ $5 \leq x < 10$ (1)
2.5	Estimated mean = $\frac{2,5(3) + 7,5(11) + 12,5(20) + 17,5(8) + 22,5(5) + 27,5(3)}{50}$ $= \frac{675}{50}$ $= 13,5 \text{ km}$	✓ new frequencies ✓ $\sum fx$ ✓ answer (3)
		[11]

9. Eighty school bags: build the cumulative column, then the ogive

Official DBE marking guideline · May/June 2022 · Q1 · 12 marks

QUESTION/VRAAG 1

1.1	Modal class: $9 < m \leq 11$	✓ answer (1)																								
1.2	<table border="1"> <thead> <tr> <th>Mass (in kg)</th><th>Frequency</th><th>Cumulative frequency</th></tr> </thead> <tbody> <tr> <td>$5 < m \leq 7$</td><td>6</td><td>6</td></tr> <tr> <td>$7 < m \leq 9$</td><td>18</td><td>24</td></tr> <tr> <td>$9 < m \leq 11$</td><td>21</td><td>45</td></tr> <tr> <td>$11 < m \leq 13$</td><td>19</td><td>64</td></tr> <tr> <td>$13 < m \leq 15$</td><td>11</td><td>75</td></tr> <tr> <td>$15 < m \leq 17$</td><td>4</td><td>79</td></tr> <tr> <td>$17 < m \leq 19$</td><td>1</td><td>80</td></tr> </tbody> </table>	Mass (in kg)	Frequency	Cumulative frequency	$5 < m \leq 7$	6	6	$7 < m \leq 9$	18	24	$9 < m \leq 11$	21	45	$11 < m \leq 13$	19	64	$13 < m \leq 15$	11	75	$15 < m \leq 17$	4	79	$17 < m \leq 19$	1	80	✓ adding ✓ 80 (2)
Mass (in kg)	Frequency	Cumulative frequency																								
$5 < m \leq 7$	6	6																								
$7 < m \leq 9$	18	24																								
$9 < m \leq 11$	21	45																								
$11 < m \leq 13$	19	64																								
$13 < m \leq 15$	11	75																								
$15 < m \leq 17$	4	79																								
$17 < m \leq 19$	1	80																								
1.3		✓ grounding (5 ; 0) ✓ points ✓ shape (3)																								
1.4	Median mass: 10,5 kg	✓✓ answer (2)																								
1.5.1	$\bar{x} = \frac{(6 \times 6 + 18 \times 8 + 21 \times 10 + 19 \times 12 + 11 \times 14 + 4 \times 16 + 1 \times 18)}{80}$ $= \frac{854}{80}$ $= 10,68$ Answer only 2/2	✓ 854 ✓ answer (2)																								
1.5.2	Learners' bags are heavier than the stipulated international guideline. Estimated mean = 10,68 kg 10% of 80 kg = 8 kg 10,68 kg > 8 kg	✓ answer ✓ 8 kg (2)																								

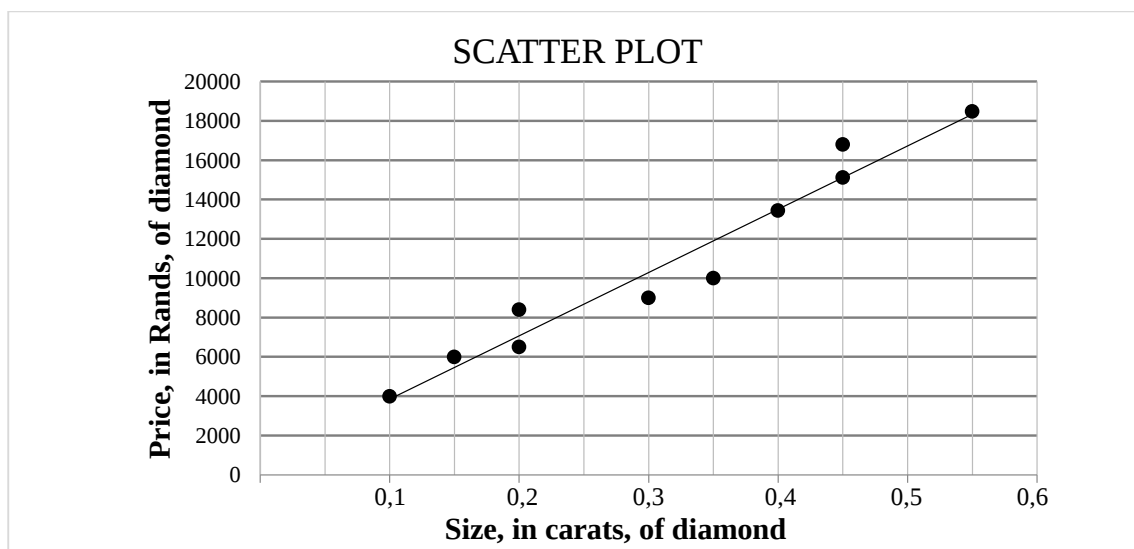
OR/ OF	
Learners' bags are heavier than the stipulated international guideline.	✓ answer
Estimated mean $= \frac{10,68}{80} \times 100$	
$= 13,35\%$	✓ 13,35%
$13,35\% > 10\%$	(2)
[12]	

10. Diamonds: size against price, with the line already drawn

Official DBE marking guideline · May/June 2022 · Q2 · 8 marks

QUESTION/VRAAG 2

Size, in carats, of diamond (x)	0,1	0,15	0,2	0,2	0,3	0,35	0,4	0,45	0,45	0,55
Price, in rands, of diamond (y)	4 000	6 000	6 500	8 400	9 000	10 000	13 440	15 120	16 800	18 480



2.1	$a = 634,382\dots$ $b = 32\,189,263\dots$ $\hat{y} = 634,38 + 32189,26x$ Answer only 3/3	✓ a ✓ b ✓ equation (3)
2.2	$\hat{y} = 634,38 + 32189,26(0,25)$ $= R8\,681,70$ OR/OF $\hat{y} = R8\,681,70$ (if using calculator)	✓ substitution ✓ answer (2) ✓ ✓ answer (2)
2.3	Average price increase $= R \frac{32189,26}{20}$ per 0,05 carat $= R1\,609,46$ per 0,05 carat OR/OF Average price increase $= 0,05 \times 32\,189,26$ $= R1\,609,46$ per 0,05 carat OR/OF at 0,3: $\hat{y} = R10\,291,16$ $\therefore$ Average price increase $= 10\,291,16 - 8\,681,70$ $= R1\,609,46$ per 0,05 carat Answer only 2/2	✓ divide gradient by 20 ✓ answer (2) ✓ multiply gradient by 0,05 ✓ answer (2) ✓ Estimated price of a 0,3 carat diamond ✓ answer (2)
2.4	The point (0,35 ; 11500) is closer to the least squares regression line.	✓ reason (1)
181		

11. Milk: the price against how many containers sell

Official DBE marking guideline · November 2021 · Q2 · 10 marks

QUESTION/VRAAG 2

Price of milk in rands per 5-litre container (x) <i>Prys van melk in rand, per 5 liter-houer (x)</i>	26	32	36	28	40	33	29	34	27	30
Number of 5-litre containers of milk sold (y) <i>Aantal 5 liter-houers melk verkoop (y)</i>	48	30	26	44	23	32	39	29	42	33

2.1	SCATTER PLOT	1 mark: 3 to 5 points plotted correctly 2 marks: 6 to 9 points plotted correctly 3 marks: all points plotted correctly (3)
2.2	$a = 90,478... \approx 90,48$ $b = -1,773... \approx -1,77$ $\hat{y} = 90,48 - 1,77x$ Answer only: Full marks Slegs antw: Volpunte	✓ a ✓ b ✓ equation (3)
2.3	$y = 23,069... \approx 23,07$ units/eenhede (calculator/sakrekenaar) OR/OF $y = 90,48 - 1,77(38)$ $y = 23,22$ units/eenhede	✓✓ answer (2) ✓ substitution ✓ answer (2)
2.4	$r = -0,94$ The value of r indicates a strong relationship between the cost per 5 litre and the number of units sold $\therefore$ there is a good chance of the prediction being accurate./ <i>Die waarde van r dui 'n sterk vewantskap tussen die koste per 5 liter en die aantal eenhede verkoop aan $\therefore$ daar is 'n goeie kans dat die voorspelling akkuraat is</i>	✓ value of r OR/OF strong relationship/ sterk verwantskap ✓ accurate/akkuraat (2)
[10]		

12. Pages against weight for ten books

Official DBE marking guideline · May/June 2024 · Q1 · 10 marks

QUESTION/VRAAG 1

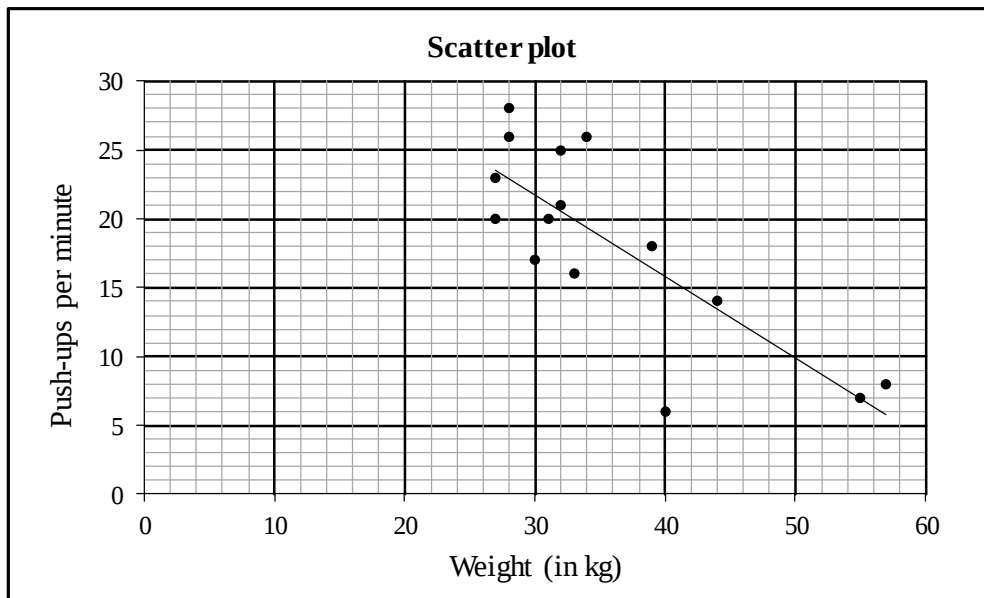
1.1	$a = -43,72$ $b = 2,36$ $y = -43,72 + 2,36x$	✓ $a = -43,72$ ✓ $b = 2,36$ ✓ equation (3)
1.2	Scatter plot	✓ any correct two points ✓ straight line joining the points for $x \in [85 ; 160]$ (2)
1.3	$y = -43,72 + 2,36(110)$ $y = 215,88$ OR $y = 215,90$ (calculator)	✓ substitution ✓ answer (2) ✓✓ answer (2)
1.4	$y = -43,72 + 2,36(130)$ $y = 263,08$ Percentage increase in weight = $\frac{263,08 - 215,88}{215,88} \times 100$ = 21,86% OR $y = 263,08$ Percentage = $\frac{263,08}{215,88} \times 100$ = 121,86 % Percentage increase in weight = $121,86 - 100 = 21,86$	✓ y -value ✓ difference between y-values ✓ +ve answer (3) ✓ y -value ✓ difference between % ✓ +ve answer (3)
		[10]

13. Rugby players: weight against push-ups in a minute

Official DBE marking guideline · November 2024 · Q1 · 10 marks

QUESTION/VRAAG 1

Weight (in kg) (x)	34	32	40	27	33	28	27	55	39	44	30	57	28	32	31
Number of push-ups per minute (y)	26	21	6	20	16	26	23	7	18	14	17	8	28	25	20



1.1	$a = 39,456001\dots$ $b = -0,590018\dots$ $\hat{y} = 39,46 - 0,59x$ CORRECT ANSWER ONLY: FULL MARKS	✓ $a = 39,46$ ✓ $b = -0,59$ ✓ equation (3)
1.2	$r = -0,8$	✓ (A) $-0,8$ (1)
1.3	$y = 39,46 - 0,59(29)$ $y = 22,35$ OR/OF $y = 22,35$ (calculator)	✓ substitution ✓ answer (2) ✓✓ answer (2)
1.4	$\bar{y} = 18,33$	✓ (A) $18,33$ (1)
1.5	The increase in the number of push-ups will have no influence . The standard deviation stays the same .	✓ no influence OR standard deviation remains the same <i>geen verandering /</i> <i>bly dieselfde</i> (1)
1.6	6 is furthest y-value below the least squares regression line. An increase of 10 push-ups will get the team member to (40 ; 16), the minimum number of push-ups for a player weighing 40kg.	✓ 6 ✓ difference is 10 (2)
		[10]

14. Online orders against the time taken to pack them

Official DBE marking guideline · May/June 2025 · Q2 · 10 marks

QUESTION/VRAAG 2

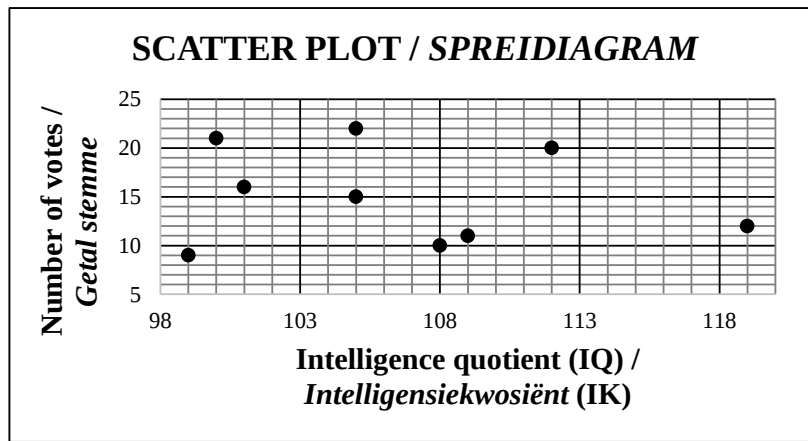
Number of items/ <i>Aantal items</i> (x)	10	3	20	14	17	9	12	18	15	19
Time (in minutes)/ <i>Tyd in minute</i> (y)	5	5	9	7	6	6	8	11	10	12

2.1	Scatter plot / Spreidiagram	✓ 3 points correct ✓ 6 points correct ✓ all points correct (3)
2.2	$a = 3,079\dots$ $b = 0,351\dots$ $\hat{y} = 3,08 + 0,35x$	✓ $a = 3,08$ ✓ $b = 0,35$ ✓ equation (3)
2.3	$r = 0,74$	✓ 0,74 (1)
2.4	$y = 3,08 + 0,35(13)$ $y = 7,63$ OR $y = 7,65$ (calculator)	✓ substitute $x=13$ ✓ answer (2) ✓✓ 7,65 (2)
2.5	It does not make sense to pack 0 items in 3,08 minutes. <i>Dit maak nie sin dat 0 items in 3,08 minute gepak kan word nie.</i>	✓ answer (1)
		[10]

15. IQ against votes received - and whether that means anything

Official DBE marking guideline · November 2022 · Q1 · 12 marks

QUESTION/VRAAG 1



Popularity score (x) <i>Gewildheidspunt (x)</i>	32	89	35	82	50	59	81	40	79	65
Number of votes (y) <i>Getal stemme (y)</i>	9	22	10	21	11	15	20	12	19	16

1.1.1	$\bar{y} = \frac{155}{10}$ $= 15,5$	ANSWER ONLY: Full marks	✓ 155 ✓ answer (2)
1.1.2	SD = 4,59		✓ answer (1)
1.2	$\bar{y} - SD$ $= 15,5 - 4,59$ $= 10,91$ $\therefore 10 - 2 = 8$ learners		✓ value of $\bar{y} - SD$ ✓ answer (2)
1.3	$a = 1,7709...$ $b = 0,2243...$ $\hat{y} = 1,77 + 0,22x$		✓ a ✓ b ✓ equation (3)
1.4	$\hat{y} = 1,77 + 0,22(72)$ $= 17,61$ ≈ 18 votes OR/OF $\hat{y} = 17,92 \approx 18$ votes		✓ substitution ✓ answer (2) ✓✓ answer (2)
1.5.1	Points are all scattered therefore low correlation and unrealistic prediction./ <i>Punte is versprei daarom 'n lae korrelasie en onrealistiese voorspelling.</i>		✓ R (1)
1.5.2	$r = 0,98$ /correlation very strong/ <i>korrelasie baie sterk</i> $\therefore$ a reliable prediction/ <i>'n betroubare voorspelling</i>		✓ S (1)
			[12]

16. How far a truck driver travels against how long he rests

Official DBE marking guideline · November 2023 · Q1 · 12 marks

QUESTION/VRAAG 1

1.1	$a = -23,846\dots$ $b = 0,227\dots$ $\hat{y} = -23,85 + 0,23x$	✓ $a = -23,846\dots$ ✓ $b = 0,227\dots$ ✓ equation (3)
1.2	$\hat{y} = -23,85 + 0,23(550)$ $y = 102,65$ OR $y = 101,02$	✓ substitution of 550 ✓ answer (2) ✓✓ $y = 101,02$ (calculator) (2)
1.3	$r = 0,98$	✓ $r = 0,98$ (1)
1.4	Very strong positive correlation	✓ strong positive (1)

50	100	130	150	180	190	200	200
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1.5.1	$\bar{x} = \frac{1200}{8}$ $\bar{x} = 150$ OR $\bar{x} = 150$	✓ 1200 ✓ answer (2) ✓✓ $\bar{x} = 150$ (2)
1.5.2	$\sigma = 50,50$	✓ $\sigma = 50,50$ (1)
1.5.3	$\bar{x} - \sigma$ $= 150 - 50,50$ $= 99,50$ $\therefore$ 1 stop	✓ calculation of $\bar{x} - \sigma$ ✓ answer (2)
		[12]