

STATISTIEK

Oplossings

Die DBE se eie nasienriglyne, in boekvolgorde

Elke oplossing hier is 'n uitknipsel van die amptelike DBE-nasienriglyn wat saam met die vraestel gepubliseer is waaruit die vraag kom. Die bewerking, die punt-merke en die aanvaarde alternatiewe is die DBE se eie. Niks is oorgeskryf of oor afgelei nie.

Die nommers pas by die vraeboek: oplossing 34 antwoord vraag 34, en die hoofstukke is in dieselfde volgorde.

Die DBE skryf een riglyn vir albei tale, so hierdie bladsye is tweetalig en hul nasienaantekeninge is grootliks in Engels. Dit is die DBE se eie bladsy, presies soos gedruk weergegee.

'n Nasienriglyn word vir nasieners geskryf, nie vir leerders nie. Dit wys die kortste pad na die punte, so waar 'n stap saamgepers lyk, is dit die riglyn wat bondig is eerder as 'n stap wat ontbreek.

1. Glase water per dag, uit 'n frekwensietabel

Amptelike DBE-nasienriglyn · November 2023 · V2 · 8 punte

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. Vyftien versekeringspremies: die gemiddeld, dan die spreiding

Amptelike DBE-nasienriglyn · Mei/Junie 2025 · V1 · 9 punte

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. Brode oor 18 dae, en die waardes wat ver uit lê

Amptelike DBE-nasienriglyn · November 2021 · V1 · 10 punte

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 <i>Slegs antw: Volpunte</i>	✓ 396 ✓ answer (2)
1.1.2	$\sigma = 10,1707 \approx 10,17$		✓ answer (1)
1.1.3	$\bar{x} + \sigma = 32,17$ $\therefore 5 \text{ days}$		✓ 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)
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. Vyftien dae se data: die gemiddeld, dan die standaardafwyking

Amptelike DBE-nasienriglyn · Mei/Junie 2021 · V1 · 14 punte

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

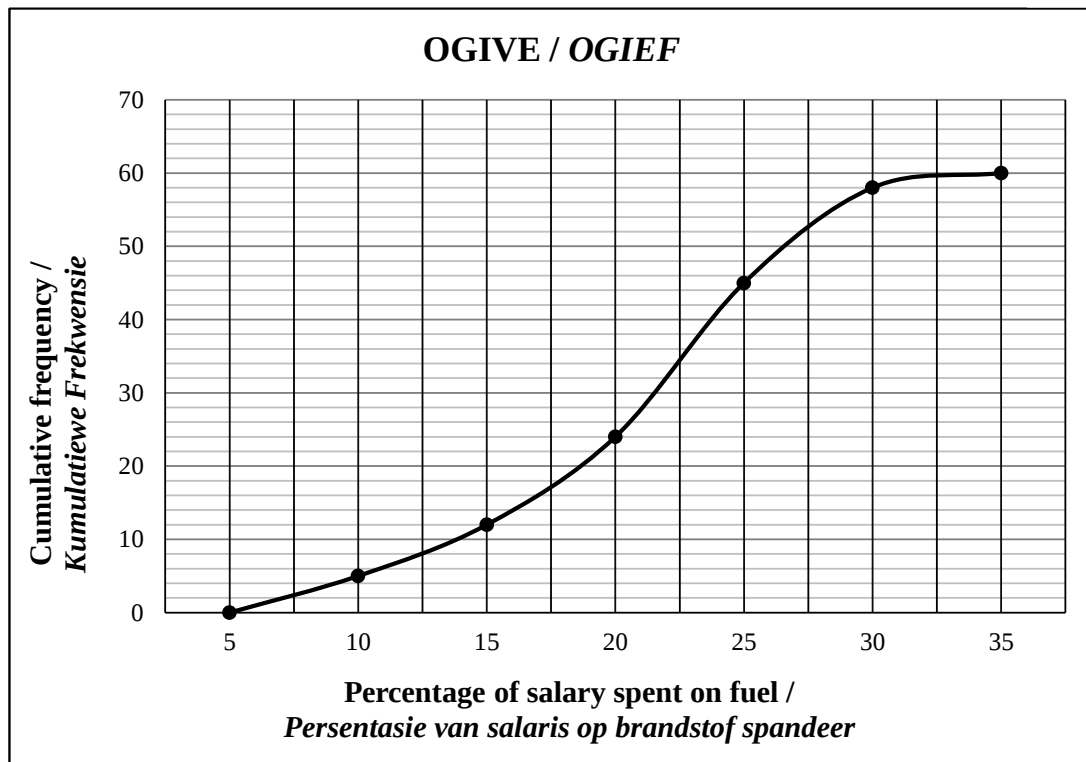
Wind speed in km/h (x)	2	6	15	20	25	17	11	24	13	22
Temperature in °C (y)	28	26	22	22	16	20	24	19	26	19

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. 'n Ogief van wat werknemers aan brandstof bestee

Amptelike DBE-nasienriglyn · November 2022 · V2 · 8 punte

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. Dae afwesig, gegroeppeer: die modale klas en 'n geskatte gemiddeld

Amptelike DBE-nasienriglyn · Mei/Junie 2021 · V2 · 9 punte

QUESTION/VRAAG 2

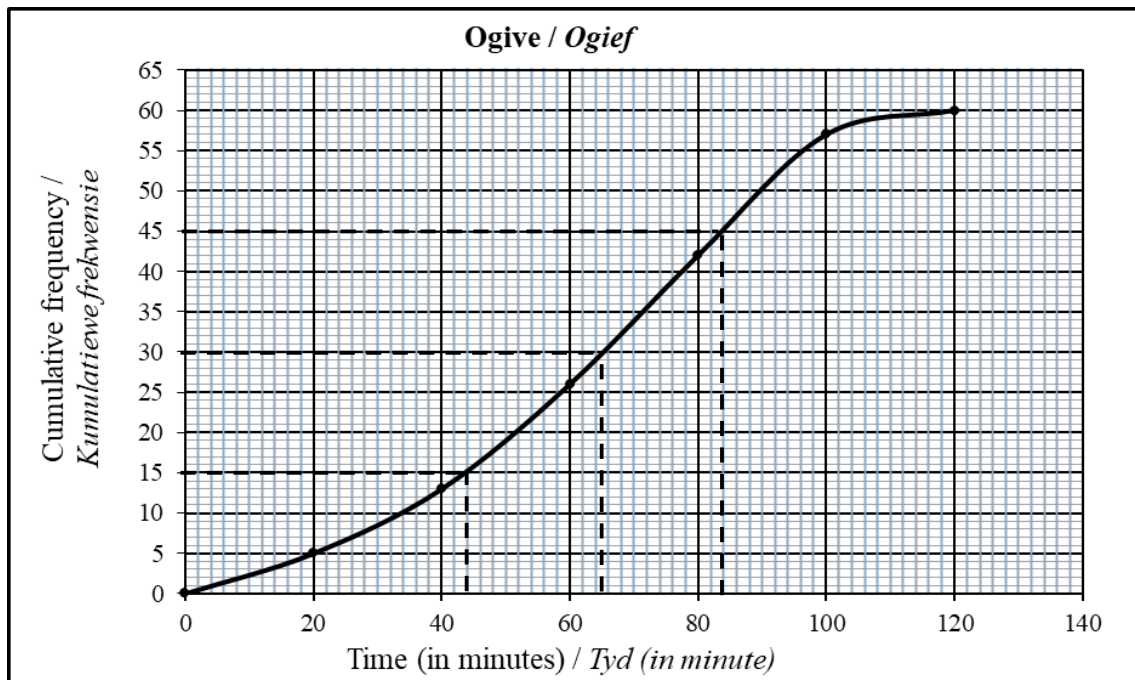
Number of days absent	Number of learners	Cumulative frequency
$0 \leq x < 5$	34	34
$5 \leq x < 10$	45	79
$10 \leq x < 15$	98	177
$15 \leq x < 20$	43	220
$20 \leq x < 25$	7	227
$25 \leq x < 30$	3	230

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. Sestig reistye op een ogief, dan 'n reël oor tuiswerk

Amptelike DBE-nasienriglyn · November 2024 · V2 · 10 punte

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 (2) ✓ 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. Hoe ver vyftig atlete reis om by fasiliteite uit te kom

Amptelike DBE-nasienriglyn · Mei/Junie 2024 · V2 · 11 punte

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. Tagtig skoolsakke: bou die kumulatiewe kolom, dan die ogief

Amptelike DBE-nasienriglyn · Mei/Junie 2022 · V1 · 12 punte

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)																								

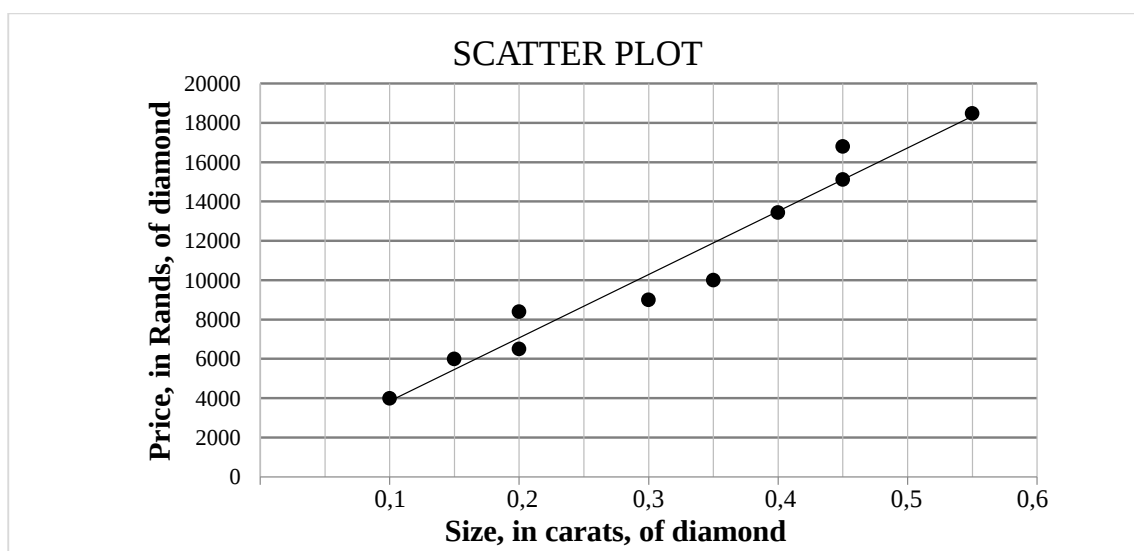
OR/ OF Learners' bags are heavier than the stipulated international guideline. Estimated mean $= \frac{10,68}{80} \times 100$ $= 13,35\%$ $13,35\% > 10\%$	✓ answer ✓ 13,35% (2)
[12]	

10. Diamante: grootte teenoor prys, met die lyn reeds getrek

Amptelike DBE-nasienriglyn · Mei/Junie 2022 · V2 · 8 punte

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. Melk: die prys teenoor hoeveel houers verkoop

Amptelike DBE-nasienriglyn · November 2021 · V2 · 10 punte

QUESTION/VRAAG 2

Price of milk in rands per 5-litre container (x) Prys van melk in rand, per 5 liter-houer (x)	26	32	36	28	40	33	29	34	27	30
Number of 5-litre containers of milk sold (y) Aantal 5 liter-houers melk verkoop (y)	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. Bladsye teenoor gewig vir tien boeke

Amptelike DBE-nasienriglyn · Mei/Junie 2024 · V1 · 10 punte

QUESTION/VRAAG 1

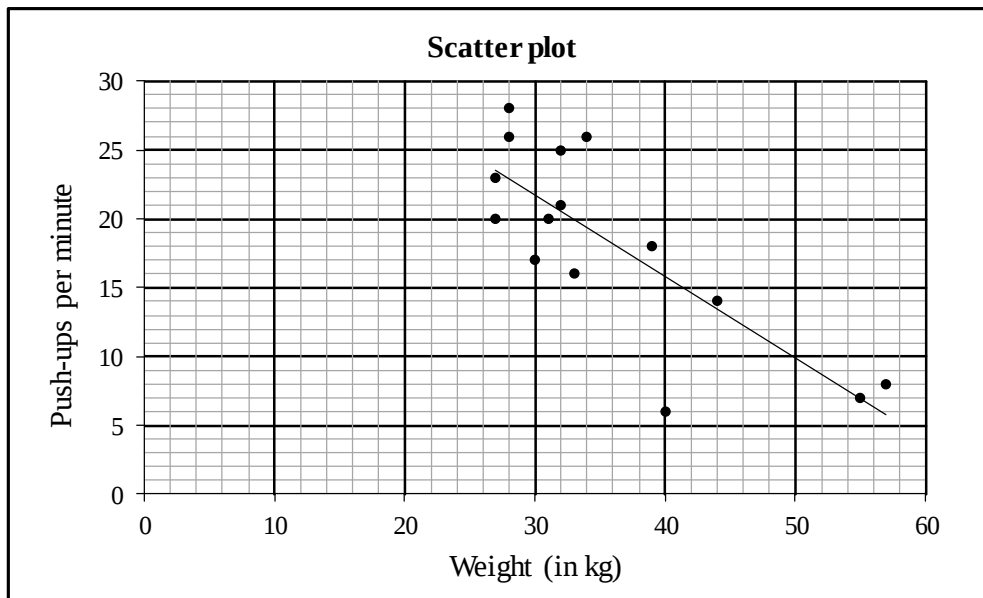
1.1	$a = -43,72$ $b = 2,36$ $y = -43,72 + 2,36x$	✓ $a = -43,72$ ✓ $b = 2,36$ ✓ equation (3)
1.2	Scatter plot	✓ any correct two points ✓ straight line joining the points for $x \in [85 ; 160]$ (2)
1.3	$y = -43,72 + 2,36(110)$ $y = 215,88$ OR $y = 215,90$ (calculator)	✓ substitution ✓ answer (2) ✓✓ answer (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. Rugbyspelers: gewig teenoor opstote in 'n minuut

Amptelike DBE-nasienriglyn · November 2024 · V1 · 10 punte

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. Aanlynbestellings teenoor die tyd wat dit vat om te pak

Amptelike DBE-nasienriglyn · Mei/Junie 2025 · V2 · 10 punte

QUESTION/VRAAG 2

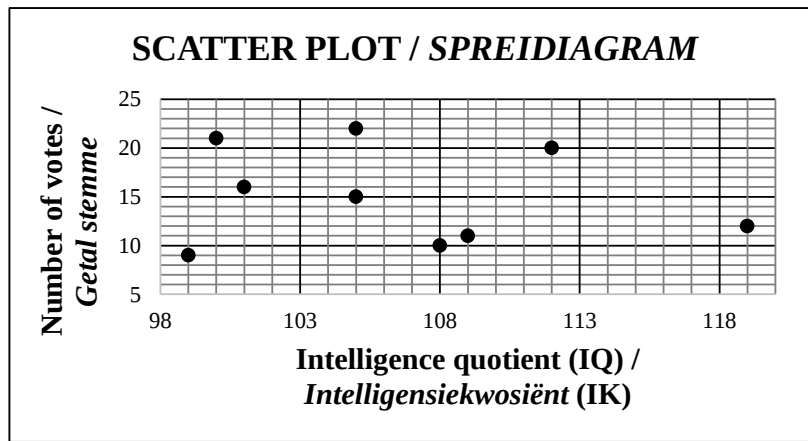
Number of items/Aantal items (x)	10	3	20	14	17	9	12	18	15	19
Time (in minutes)/Tyd in minute (y)	5	5	9	7	6	6	8	11	10	12

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. IK teenoor stemme ontvang - en of dit iets beteken

Amptelike DBE-nasienriglyn · November 2022 · V1 · 12 punte

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. Hoe ver 'n vragmotorbestuurder ry teenoor hoe lank hy rus

Amptelike DBE-nasienriglyn · November 2023 · V1 · 12 punte

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	$\bar{x} - \sigma$ $= 150 - 50,50$ $= 99,50$ $\therefore 1 \text{ stop}$	✓ calculation of $\bar{x} - \sigma$ ✓ answer (2)
		[12]