

**GRAAD 12 WISKUNDE**  
**NOVEMBER EKSAMEN VRAESTEL 2**

**VRAAG 1**

Die volgende frekwensietabel wys die aantal doele van die Protea netbal span in 50 wedstryde in 2018.

Aantal doele	Frekwensie	Kumulasiewe frekwensie
$5 < x \leq 10$	8	3
$10 < x \leq 15$	a	14
$15 < x \leq 20$	13	27
$20 < x \leq 25$	9	c
$25 < x \leq 30$	7	43
$30 < x \leq 35$	d	48
$35 < x \leq 40$	e	50

- 1.1 Bepaal die waardes van a tot e. (5)  
1.2 Bereken die gemiddelde aantal doele in 2018. (2)

(7)

**VRAAG 2**

Die tabel hieronder toon die polsslag per minuut vir 10 mans. Hulle polsslag is gemeet voor hulle fiets gery het vir 10min (x) en na daarna (y).

	1	2	3	4	5	6	7	8	9	10
Polsslag voor	85	90	125	90	85	112	93	118	85	100
Polsslag na	95	100	135	125	135	145	95	175	100	160

- 2.1 Stel die data voor op die spreidingsdiagram. (4)  
2.2 Bereken die gemiddelde polsslag voor EN na oefening. (2)  
2.3 Bepaal die formule vir die kleinste regressielyn tot 4 desimale plekke. (2)

- 2.4 Bereken die korrelasiekoëffisiënt tot 4 desimale plekke EN lewer kommentaar op die sterkte daarvan. (2)  
2.5 Teken die kleinste kwadrate regressielyn op jou spreidingsdiagram. (1)  
(10)

**VRAAG 3**

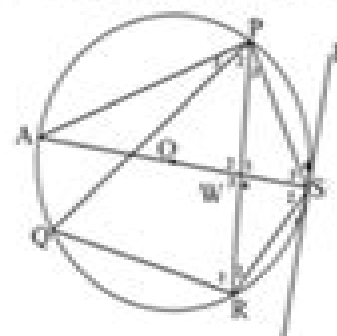
Die tabel hieronder wys die afstande (in kilometers) wat deur 'n verkoopsman afgeleë vir 21 werkdase in 'n sekere maand.

131	132	140	140	141	144	146
147	149	150	151	159	167	169
169	172	174	175	178	187	189

- 3.1 Bereken die gemiddelde afstand afgeleë deur die verkoopsman. (2)  
3.2 Skryf die vyf-getal opsomming van die data neer. (4)  
3.3 Teken die snor-en-beard diagram vir die dataset. (2)  
3.4 Bereken die standaardafwyking van afstand geneis. (2)  
(10)

**VRAAG 4**

- 4.1 Die diagram toon P, A, Q, R en S lê op die omtrek van die sirkel met middelpunt O. SB is 'n raaklyn by S en RQNP, AQNS en RNP is reguitlyne.



Bewys dat:

- 4.1.1  $SB \parallel RP$  (4)  
4.1.2  $SR^2 = RQ \cdot AS$  (5)  
4.1.3  $AS = \frac{RQ^2}{RP} + RQ$  (4)

# Maths P2 Nss Graad 1model Dbe 2013 Memo

**Christian G. Meyer**



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web several different types of plain steel reinforced concrete sleeper were used some initiated by the private rail companies and others by the war department my researches are mainly based on my local ex gwr experiences where it has been possible to see and record designs still in use today

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web lateral sleeper resistance anchor type cs egc for ef28 eg47 eg49 concrete sleepers centre fitting 0050 563357 lateral sleeper resistance anchor type cs fc for f19 f23 ef25 f27 concrete sleepers centre fitting 0057 048173 lateral resistance end plate 3 hole for timbers 0057 048875

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web f34 f35 concrete sleepers and 400 series steel sleepers with 56e1 or bs110a or bs110a rails 0057 048424 blue nylon type 724a 5mm sidepost thickness 5mm blade thickness used where 98lb and 109lb rail is installed used for concrete sleeper types f23 f24 ef25 f27 ef28 ef29 ef33 f34 f35 as well as steel sleepers 400 series