education

MPUMALANGA PROVINCE

REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE NASIONALE SENIOR SERTIFIKAAT



GRADE 12 / GRAAD 12

MATHEMATICS PAPER 2/ WISKUNDE VRAESTEL 2

SEPTEMBER 2025

MARKING GUIDELINE / NASIENRIGLYN

MARKS / PUNTE: 150

These marking guidelines consist of 17 pages.

Hierdie nasienriglyn bestaan uit 17 bladsye.

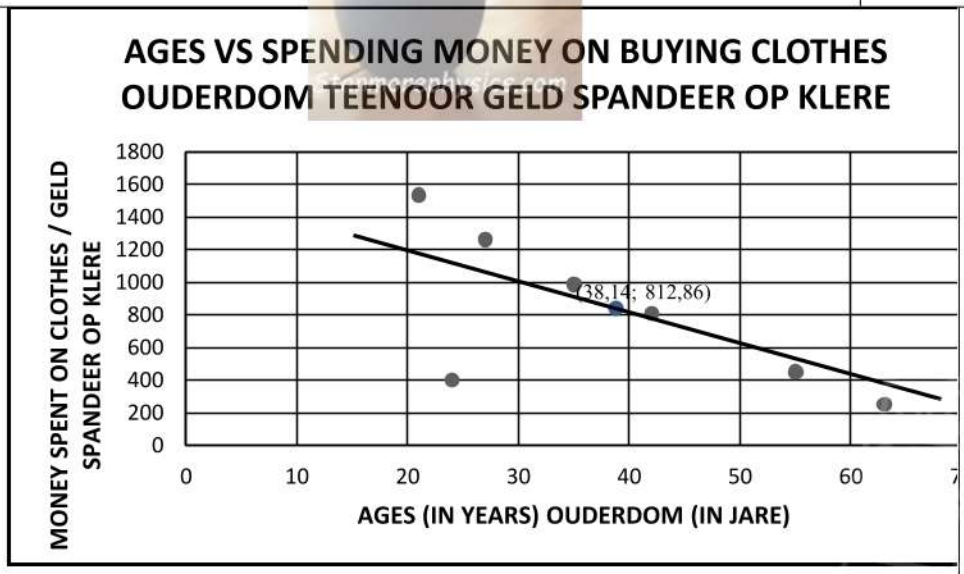
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NOTE:

- 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 guideline.
- Assuming values/answers in order to solve a problem is unacceptable.

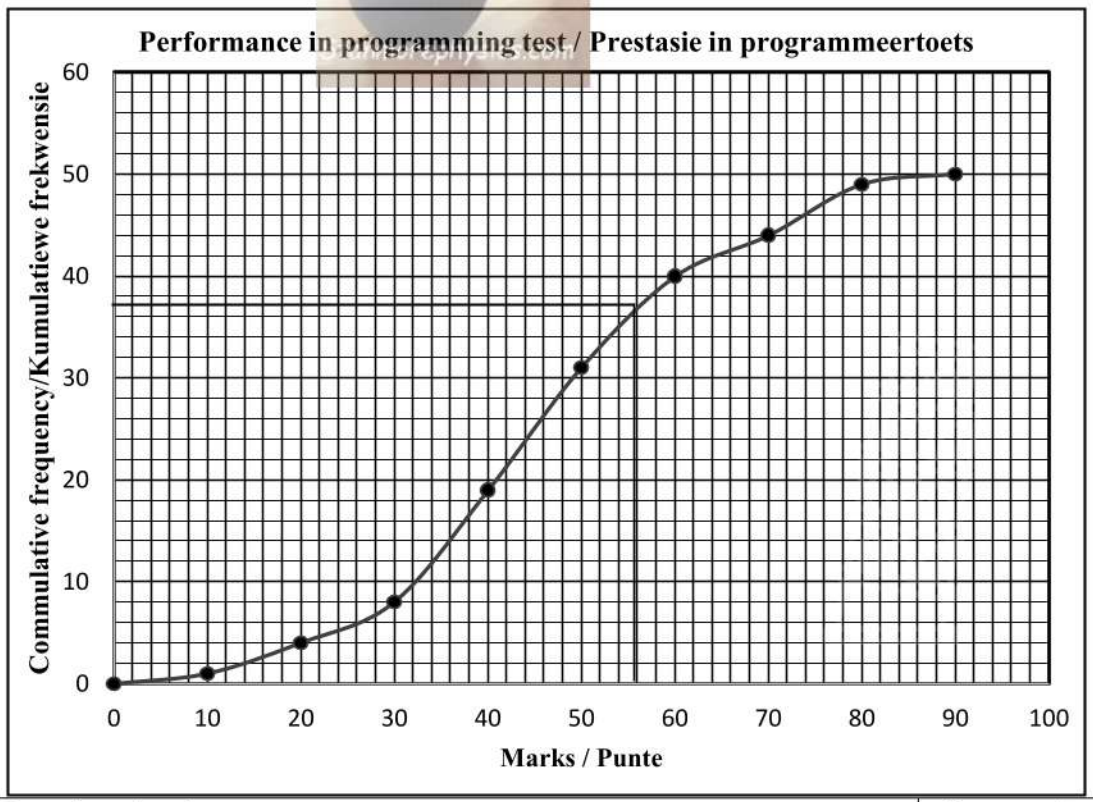
LET WEL:

- As 'n kandidaat 'n vraag TWEE keer beantwoord het, sien slegs die EERSTE poging na.
- As 'n kandidaat 'n antwoord deurgehaal en nie oorgedoen het nie, sien die deurgehaalde antwoord na.
- Volgehoue akkuraatheid is op ALLE aspekte van die nasienriglyn van toepassing.
- Dit is onaanvaarbaar om waardes/antwoorde te veronderstel om 'n probleem op te los.

QUESTION 1		
1.1	A = 1 607,113187 B = −20,82319216 $\hat{y} = 1607{,}11 - 20{,}82x$	✓ 1578,539116 ✓ −22,32125028 ✓ equation / vergelyking (3)
1.2		✓ shape/vorm ✓ passes through the mean point (38,14; 812,86) / deur die gemiddelde punt (2)
1.3	$r = -0{,}68 \quad -0{,}69995 \ldots = -0{,}70$	✓ answer antwoord (1)
1.4	$\hat{y} = 1578{,}54 - 22{,}32(50) \quad 1607{,}11 - 20{,}82(50)$ $= 462{,}54 \qquad\qquad 566{,}11$ OR / OF	✓ substitution / substitusie ✓ answer antwoord (2)

	$\hat{y} = 462{,}48$ 565,95 (from calculator)(sakrekenaar)	OR / OF ✓ ✓Answer
1.5	It is NOT reliable since there is NO STRONG correlation between the variables / It is FAIRLY reliable since there is an AVERAGE correlation between the variables. Dit is NIE betroubaar nie want daar is nie 'n STERK korrelasie tussen die veranderlikes nie / Dit is REDELIK betroubaar, want daar is 'n GEMIDDELDE korrelasie.	✓ Not reliable Nie betroubaar ✓ Not strong / nie sterk OR / OF ✓Fairly reliable / redelik betroubaar ✓ average correlation / gemiddelde korrelasie (2)
1.6	The gradient will DECREASE (become more negative) when the point is removed. Die gradiënt sal VERMINDER (meer negatief word) as die punt verwyder word.	✓ increase (more negative) / vermeerder (meer negatief) (1)
		[11]

QUESTION 2 / VRAAG 2



2.1.1	50 students/studente	✓answer /antwoord (1)

<table>
<tr><td>2.1.2</td><td>$\frac{75}{100} \times 50 = 37{,}5$

65 marks/punte or/of 65%</td><td>✓ 37,5

✓ 65 (2)</td></tr>
<tr><td>2.1.3</td><td>
<table>
<tr><th>Marks(out of 100)
Punte (uit 100)</th><th>Frequency(f)
Frekwensie(f)</th><th>Cumulative frequency
Kumulatiewe frekwensie</th></tr>
<tr><td>$0 \leq x < 10$</td><td>1</td><td>1</td></tr>
<tr><td>$10 \leq x < 20$</td><td>3</td><td>4</td></tr>
<tr><td>$20 \leq x < 30$</td><td>4</td><td>8</td></tr>
<tr><td>$30 \leq x < 40$</td><td>11</td><td>19</td></tr>
<tr><td>$40 \leq x < 50$</td><td>12</td><td>31</td></tr>
<tr><td>$50 \leq x < 60$</td><td>9</td><td>40</td></tr>
<tr><td>$60 \leq x < 70$</td><td>4</td><td>44</td></tr>
<tr><td>$70 \leq x < 80$</td><td>5</td><td>49</td></tr>
<tr><td>$80 \leq x < 90$</td><td>1</td><td>50</td></tr>
</table>
</td><td>✓1st 3 values / 1e 3 waardes
✓ all values / al die waardes
(2)</td></tr>
<tr><td>2.1.4</td><td>$\bar{x} = \frac{(1 \times 5) + (3 \times 15) + (4 \times 25) + (11 \times 35) + \cdots + (1 \times 85)}{50}$

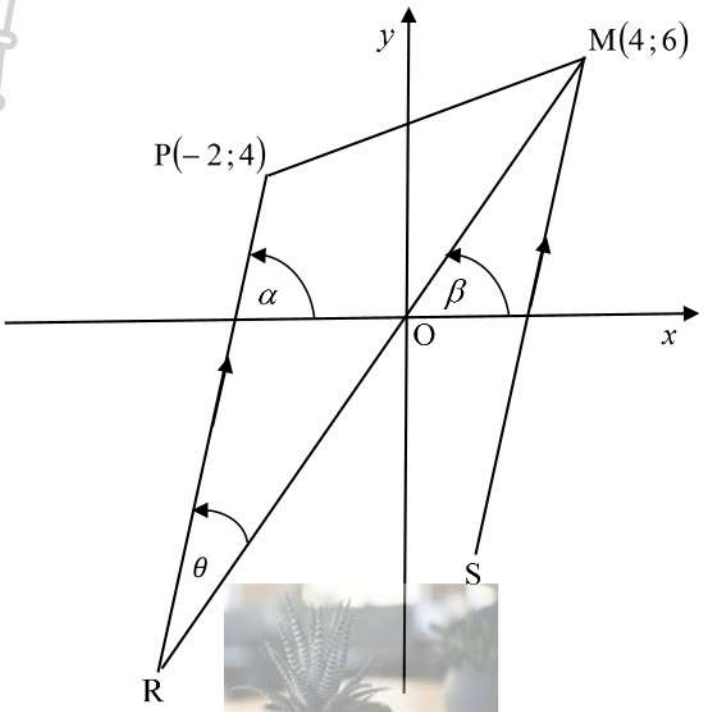
$= \frac{2290}{50} = 45{,}8$

OR / OF
45,8 (from calculator)(van sakrekenaar)</td><td>✓mid pts / middelwaardes
✓divide by 50 / deel deur 50
✓answer/ antwoord
OR / OF
✓✓✓answer / antwoord (3)</td></tr>
<tr><td>2.2</td><td>$\bar{x} = 25$ min
$\sigma = 6$ min
$= 25 + 6 = 31$
∴ 2 vouchers will be free / 2 bewyse sal gratis wees</td><td>✓25
✓6

✓ 2 (3)</td></tr>
<tr><td></td><td></td><td>[11]</td></tr>
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QUESTION 3 / VRAAG 3



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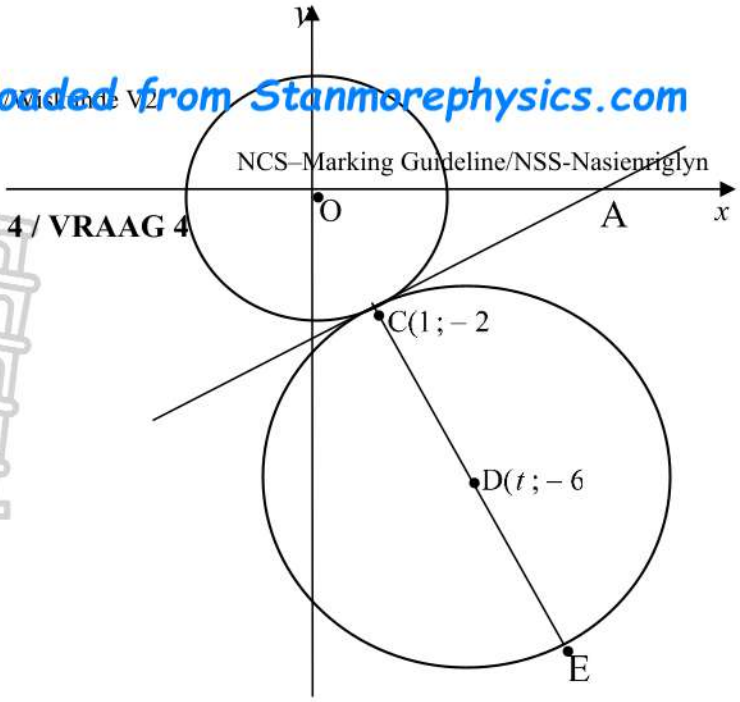
3.1	$m_{MP} = \frac{0-6}{0-4}$ $= \frac{3}{2}$	✓ Substitution into the correct formula vervang in korrekte formule ✓ $\frac{3}{2}$ (2)
3.2	$m_{MR} = \frac{0-6}{0-4}$ $= \frac{3}{2}$ Equation of MR is $y = \frac{3}{2}x$ (Vergelyking van MR)	✓ substitution vervang ✓ $\frac{3}{2}$ ✓equation / vergelyking (3)
3.2	$y = 5x - 14$ $m_{MS} = m_{PR} = 5$ PR∥MS Equation of PR $y - y_1 = m(x - x_1)$ **OR /OF** $4 = 5(-2) + c$ $y - 4 = 5(x + 2)$ $4 + 10 = c$ $\therefore y = 5x + 14$ $c = 14$	✓ $m_{PR} = 5$ ✓ sub of/vervang $(-2;4)$ ✓ answer/antwoord **OR / OF** ✓ $m_{PR} = 5$ ✓ sub of /vervang $(-2;4)$ ✓ answer/antwoord (3)

3.4	$y = \frac{3}{2}x$ and/en $y = 5x + 14$ $5x + 14 = \frac{2}{3}x$ $7x = -28$ $x = -4$ $y = -6$ $\therefore$ R$(-4\,;-6)$	✓ equating /vergelykings gelyk ✓ $x = -4$ ✓ $y = -6$ (3)
3.5	$m_{PR} = 5$ $\tan\alpha = 5$ $\alpha = 78{,}69^\circ$ $m_{MR} = \frac{3}{2}$ $\tan\beta = \left(\frac{3}{2}\right)$ $\beta = 56{,}31^\circ$ $\therefore \theta = \alpha - \beta$ $= 22{,}38^\circ$	✓ $\tan\alpha = 5$ ✓ $78{,}69^\circ$ ✓ $56{,}31^\circ$ ✓ $22{,}38^\circ$ (4)
3.6	PR $= \sqrt{(-4+2)^2 + (-6-4)^2}$ $= \sqrt{104}$ or $2\sqrt{26}$ MR $= \sqrt{(4+4)^2 + (6+6)^2}$ $= \sqrt{208}$ or/of $4\sqrt{13}$ Area of ΔPMR / Oppervlakte van ΔPMR $= \frac{1}{2}PR.MR.\sin\theta$ $= \frac{1}{2}2\sqrt{26}.4\sqrt{13}.\sin 22{,}38^\circ$ or $\frac{1}{2}\sqrt{104}.4\sqrt{13}.\sin 22{,}38^\circ$ $= 28$ Area PMSR $= 56$ units^2/eenhede^2	✓ PR ✓ MR ✓ Sub into the area rule/vervang in opp reël ✓ Answer /antwoord (4)
		[19]

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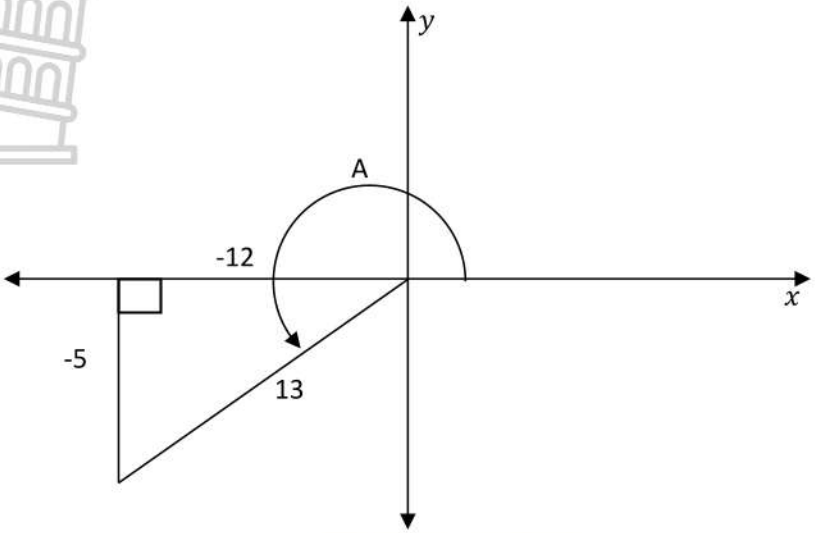
QUESTION 4 / VRAAG 4



4.1	OC ⊥ tangent [radius ⊥ tangent] [radius ⊥ raaklyn] CE ⊥ tangent [radius ⊥ tangent] [radius ⊥ raaklyn] ∴ O , C and E lies on a straight line [adjacent ∠s $=180^\circ$] ∴O, C en E lê op 'n reguit lyn. [Aangrensende ∠e = 180°]	✓ both S / beide bewerings ✓ both reasons/ beide redes (2)
4.2	$m_{OC} = \frac{-2-0}{1-0} = -2$	✓subst into formula vervang in formule ✓answer/antw (2)
4.3	$m_{CD} = -2$ $\frac{y_2 - y_1}{x_2 - x_1} = -2$ $\frac{-6+2}{t-1} = -2$ $t = 3$	✓ m_{CD} ✓ subst / vervanging (2)
4.4	$m_{\tan gent} = \frac{1}{2}$ $AC : y - y_1 = m(x - x_1)$ $y + 2 = \frac{1}{2}(x-1)$ $y = \frac{1}{2}x - \frac{5}{2}$	✓ m ✓ subst/vervang (1;–2) ✓equation vergelyking . (3)

4.5	D is the midpoint of circle / D is die middelpunt van die sirkel $\frac{1+x}{2}=3$ $x=5$ $\frac{y-2}{2}=-6$ $y=-10$ $E(5;-10)$	✓ $x=5$ ✓ $y=-10$ OR/OF answer only / slegs antw (2)
4.6	$A\hat{C}D=90^\circ$ [radius ⊥ tangent] [radius ⊥ raaklyn] $\therefore AE$ is the diameter of circle ACE [converse < in semi-circle] AE is die middellyn van die sirkel [hoek in halwe sirkel omgekeerde] $AE=\sqrt{(5-5)^2+(0+10)^2}$ $AE=\sqrt{0+100}$ $AE=10$ $\therefore radius=5$ $\text{midpt}_{AE}=\left(\frac{5+5}{2};\frac{-10}{2}\right)$ $=(5;-5)$ = centre of circle / mdpt van sirkel Vgl van sirkel/ Equation of circle ACE: $(x-5)^2+(y+5)^2=25$	✓ S / R ✓ R ✓ Radius = 5 ✓ midpt/middelpunt ✓ LHS & RHS LK en RK (5)
4.7	Circle centre O: $x^2+y^2=5$ Sirkel met middelpunt O Diameter $=2\sqrt{5}$ middellyn $\sqrt{20}<r<\sqrt{80}$ $2\sqrt{5}<r<4\sqrt{5}$	✓ $r^2=5$ ✓ diameter middellyn ✓ $\sqrt{80}=4\sqrt{5}$ ✓ endpoints eindpunte (4)
		[20]

QUESTION 5 / VRAAG 5

5.1		
5.1.1	$\cos A = -\frac{12}{13}$	✓ Diagram in quadrant 3 skets in kwadrant 3 ✓ $r = 13$ ✓ $-\frac{12}{13}$ (3)
5.1.2	$\sin 2A = 2\sin A\cos A$ $= 2\left(-\frac{5}{13}\right)\left(-\frac{12}{13}\right)$ $= \frac{120}{169}$	✓ $2\sin A\cos A$ ✓ substitution / vervanging ✓ answer / antwoord (3)
5.2	$= \frac{1}{\cos\theta.\cos\theta} - (-\tan\theta)^2$ $= \frac{1}{\cos^2\theta} - \tan^2\theta$ $= \frac{1}{\cos^2\theta} - \frac{\sin^2\theta}{\cos^2\theta}$ $= \frac{1-\sin^2\theta}{\cos^2\theta}$ $= \frac{\cos^2\theta}{\cos^2\theta}$ $= 1$	✓ $\cos\theta$. ✓ $\cos\theta$ ✓ $-\tan^2\theta$ ✓ $\frac{\sin^2\theta}{\cos^2\theta}$ ✓ $\cos^2\theta$ ✓ answer/antwoord (6)
		[12]

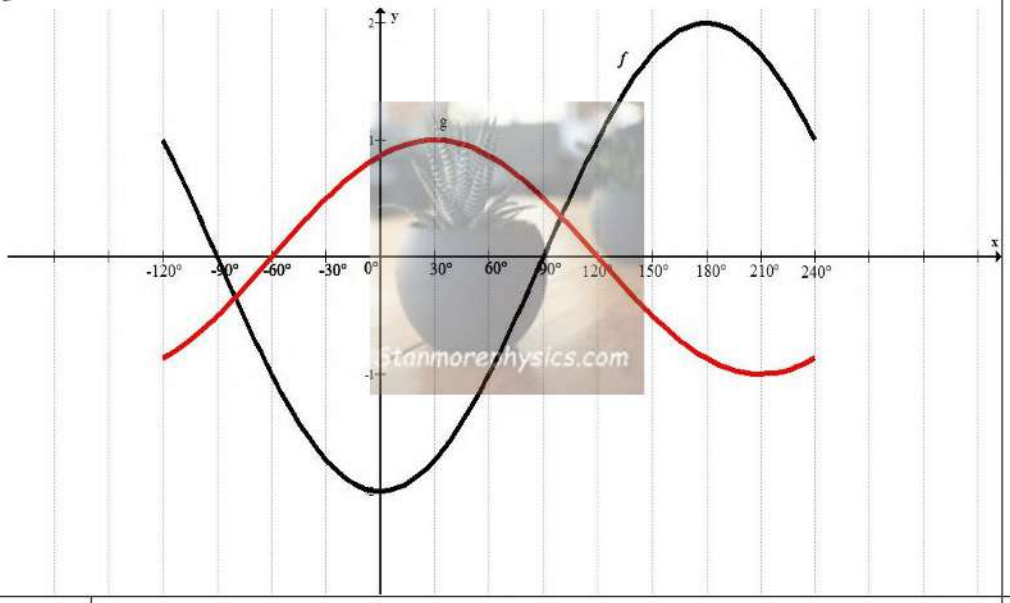
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QUESTION 6 / VRAAG 6		
6.1.1	$LHS = \dfrac{-\sin 2\theta - \cos^2\theta + 1}{\sin\theta - 2\cos\theta}$ $= \dfrac{-2\sin\theta.\cos\theta - \cos^2\theta + \sin^2\theta + \cos^2\theta}{\sin\theta - 2\cos\theta}$ $= \dfrac{\sin^2\theta - 2\sin\theta.\cos\theta}{\sin\theta - 2\cos\theta}$ $= \dfrac{\sin\theta(\sin\theta - 2\cos\theta)}{\sin\theta - 2\cos\theta}$ $= \sin\theta$ $\therefore LHS = RHS$ **OR/OF** $LHS = \dfrac{-\sin 2\theta - \cos^2\theta + 1}{\sin\theta - 2\cos\theta}$ $= \dfrac{-2\sin\theta.\cos\theta + \sin^2\theta}{\sin\theta - 2\cos\theta}$ $= \dfrac{\sin^2\theta - 2\sin\theta.\cos\theta}{\sin\theta - 2\cos\theta}$ $= \dfrac{\sin\theta(\sin\theta - 2\cos\theta)}{\sin\theta - 2\cos\theta}$ $= \sin\theta$ $\therefore LHS = RHS$	✓ $-\sin 2\theta$ ✓ $2\sin\theta.\cos\theta$ ✓ $\sin^2\theta$ ✓ common factor / gemeensk faktor ✓ simplification vereenvoudiging **OR /OF** ✓ $-\sin 2\theta$ ✓ $2\sin\theta.\cos\theta$ ✓ $\sin^2\theta + \cos^2\theta$ ✓ common factor/gemeensk faktor ✓ simplification / vereenvoudig (5)
6.1.2	$\sin\theta - 2\cos\theta = 0$ $\dfrac{\sin\theta}{\cos\theta} = \dfrac{2\cos\theta}{\cos\theta}$ $\tan\theta = 2$ $\theta = 63{,}43°$ $\theta = \{-116{,}57°; 63{,}43°\}$	✓ $\sin\theta - 2\cos\theta = 0$ ✓ $\tan\theta = 2$ ✓ $-116{,}57°$ ✓ $63{,}43°$ (4)
6.2	$\sin[(2x + 40°) - (x + 30°)] = \cos(2x - 20°)$ $\sin(x + 10°) = \cos(2x - 20°)$ $\cos[90° - (x + 10°)] = \cos(2x - 20°)$ $90° - (x + 10°) = \pm(2x - 20°) + k360° \quad k \in Z$ $x = -60° + k.360° \quad k \in Z$ or $x = 33{,}33° - k.120° \quad k \in Z$	✓ Compound angle / saamgestelde hoek ✓ $\sin(x + 10°)$ ✓ $\cos[90° - (x + 10°)]$ ✓ equating <s/ stel ∠e gelyk ✓ $x = -60° + k360°$ ✓ $x = 33{,}33° + k120°$ (6)

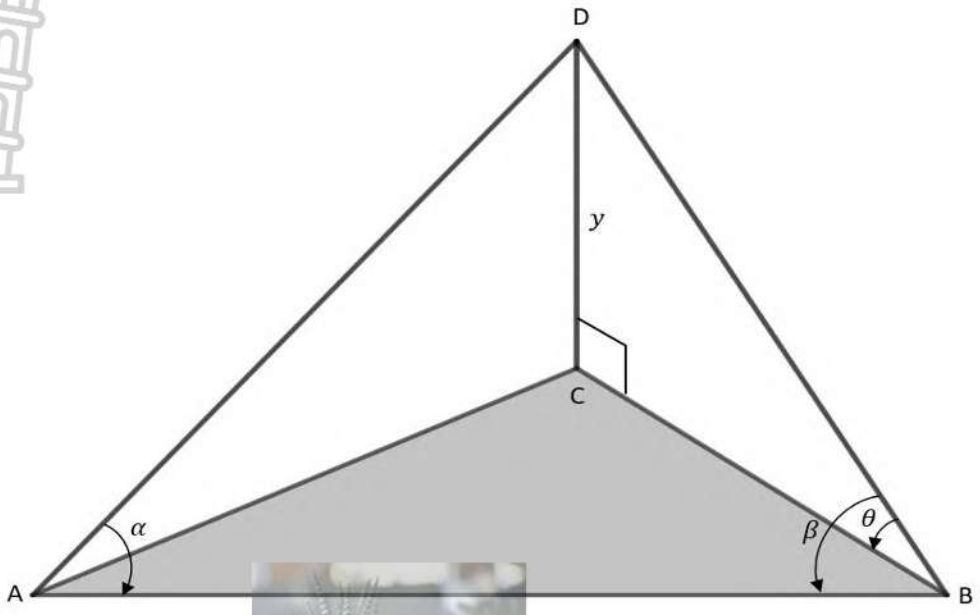
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6.3	$f(x) = 2\cos^2 x - 2$ $= 2\cos^2 x - 1 - 1$ $= \cos 2x - 1$ Max value/Maks waarde $= 0$	✓ $2\cos^2 x - 1 - 1$ ✓ identity/identiteit ✓ answer/antwoord (3)
		[18]

QUESTION 7 / VRAAG 7

7.1	Amplitude $= 2$	✓answer/antwoord (1)
7.2	$y \in [-2+3; 2+3]$ $y \in [1; 5]$	✓✓ $y \in [1; 5]$ (2)
7.3		✓ y −intercept y −afsnit ✓ x −intercepts x −afsnitte ✓ Min / Max points Min/maks punte (3)
7.4	$k < -2$ or/of $k > 2$	✓ $k < -2$ ✓ $k > 2$ (2)
7.5	$-120° \leq x < 0°$ $30° < x < 210°$	✓✓ $-120° \leq x < 0°$ ✓ $30° < x < 210°$ (3)
		[11]

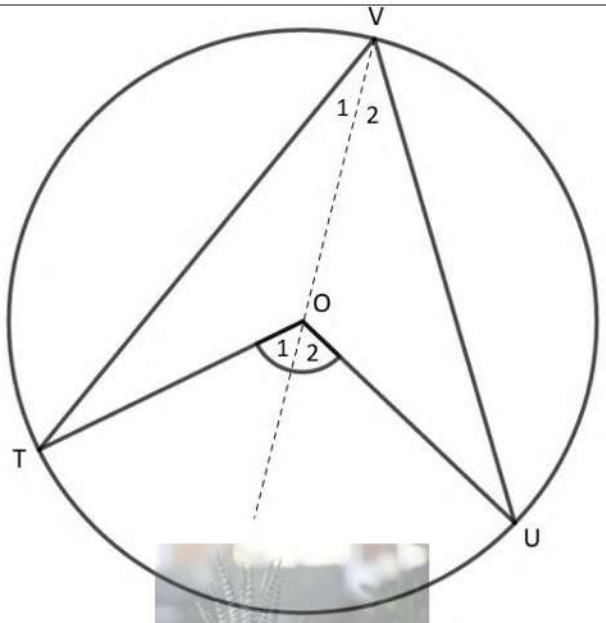
QUESTION 8 / VRAAG 8



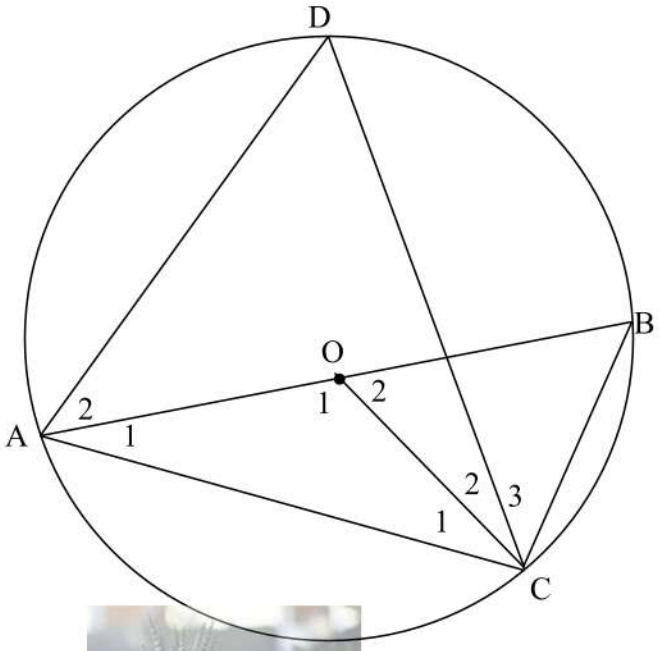
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8.1	In ΔCDB $\sin\hat{B} = \frac{DC}{DB}$ $\sin\theta = \frac{y}{DB}$ $DB = \frac{y}{\sin\theta}$	✓ trig ratio/verhouding ✓ subst / vervang ✓ answer / antwoord (3)
8.2	In ΔADB: $A\hat{D}B = 180^\circ - (\alpha + \beta)$ [sum of ∠s in Δ] [som binne∠e van Δ] $\frac{\sin\hat{A}}{DB} = \frac{\sin\hat{D}}{AB}$ $\frac{\sin\alpha}{\frac{y}{\sin\theta}} = \frac{\sin[180^\circ - (\alpha + \beta)]}{AB}$ $AB.\sin\alpha.\sin\theta = y.\sin(\alpha + \beta)$ $AB = \frac{y\sin(\alpha + \beta)}{\sin\alpha.\sin\theta}$	✓ $180° - (\alpha + \beta)$ ✓ subst into sine rule/ vervang in sin-reël ✓ simplify/vereenvoudig ✓ $\sin(\alpha + \beta)$ (4)
		[7]

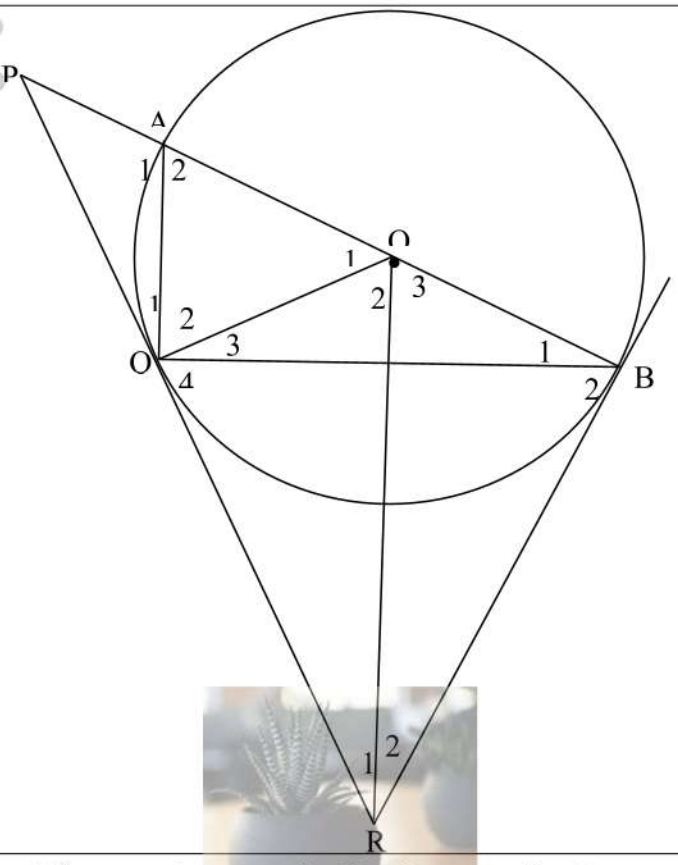
QUESTION 9 / VRAAG 9

9.1		✓ construction/konstruksie
	Construction/Konstruksie: Join/verbind VO and extend to Z / en verleng na Z	
	In ΔTOV :	
	$TO = OV$ [radii]	✓ S ✓ R
	$\hat{T} = \hat{V}_1$ [∠'s opp = sides] [hoeke teenoor gelyke sye]	✓ S/R
	$\hat{O}_1 = \hat{T} + \hat{V}_1$ [ext ∠ of Δ] [buitehoek van Δ]	
	$\hat{O}_1 = 2\hat{V}_1$	
	Similarly in ΔOUV / soortgelyk in ΔOUV:	
	$\hat{O}_2 = 2\hat{V}_2$	✓ S
	$\hat{O}_1 + \hat{O}_2 = 2\hat{V}_1 + 2\hat{V}_2$	✓ S
	$T\hat{O}U = 2(\hat{V}_1 + \hat{V}_2)$	(6)
	$\therefore T\hat{O}U = 2T\hat{V}U$	

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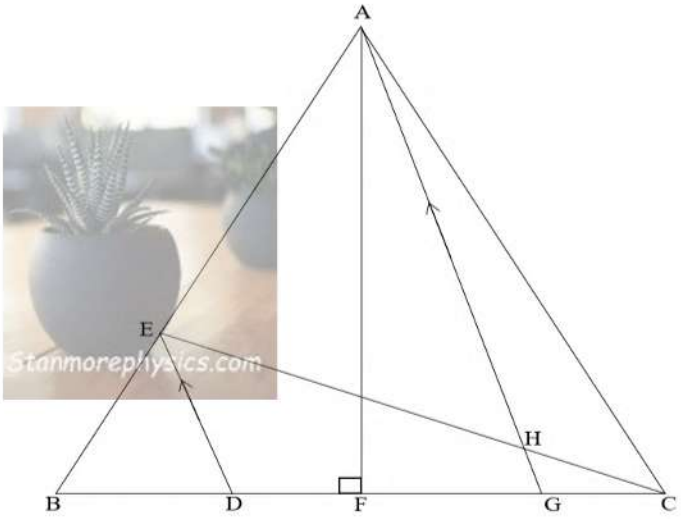
9.2		
9.2.1	$A\hat{O}C = 2\hat{D}$ [∠ at the centre = 2 × ∠ at circumference.] $104^\circ = 2\hat{D}$ [mdpts∠ = 2× omtreks∠] $\therefore \hat{D} = 52^\circ$	✓ S ✓ R (2)
9.2.2	$D\hat{A}B = \hat{C}_3 = 32^\circ$ [∠s in the same segment] [∠e in selfde sirkelsegment]	✓ S/R (1)
9.2.3	$\hat{A}_1 = \hat{C}_1$ [∠'s opp = *radii*] [∠e teenoor gelyke radiusse $\hat{A}_1 + \hat{C}_1 + \hat{O} = 180^\circ$ [sum of ∠'s in Δ] [som binne∠e van Δ] $2\hat{A}_1 + 104^\circ = 180^\circ$ $\hat{A}_1 = 38^\circ$	✓ S/R ✓ S/R ✓answer/antwoord (3)
9.2.4	$A\hat{C}B = 90^\circ$ [∠'s in the semi-circle] [∠e in halwe sirkel] $\hat{C}_3 = 32^\circ$ [∠'s in same circle segment] [∠e in selfde sirkelsegment] Maar/ But $A\hat{C}B = \hat{C}_1 + \hat{C}_2 + \hat{C}_3$ $90^\circ = 38^\circ + \hat{C}_2 + 32^\circ$ $\hat{C}_2 = 20^\circ$	✓ S / R ✓S/R ✓ answer (3)

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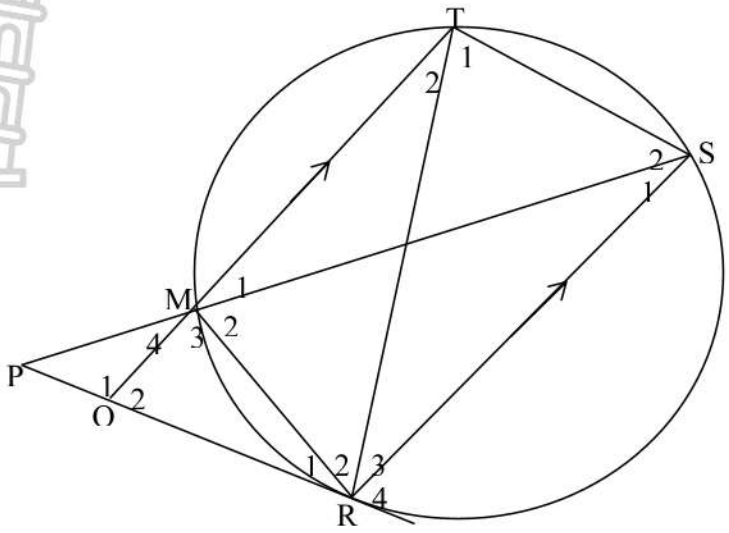
9.3		
9.3.1	$O\hat{Q}R = 90^\circ$ [tan ⊥ radius][radius ⊥ raaklyn] $O\hat{B}R = 90^\circ$ [tan ⊥ radius][radius ⊥ raaklyn] $\therefore O\hat{Q}R + O\hat{B}R = 180^\circ$ *RBOQ* is a cyclic quad [opp <s of quad supp] ∴ RBOQ is 'n KVH [teenoorst∠e van KVH omgekeerde] **OR/OF** $P\hat{Q}O = 90^\circ$ [tan ⊥ radius][radius ⊥ raaklyn] $O\hat{B}R = 90^\circ$ [tan ⊥ radius][radius ⊥ raaklyn] ∴ RBOQ is a cyclic quad [converse ext ∠of a cyclic quad] ∴ RBOQ is 'n KVH [buite∠ van KVH omgekeerde]	✓ S ✓R ✓S/R ✓ R **OR/OF** ✓S ✓ R ✓ S/R ✓ R (4)
9.3.2	$O\hat{T}B = 90^\circ$ [line from centre circle to midpt of chord] [lyn vanaf midpt sirkel na mdpt koord] $\therefore \hat{O}_3 = 90^\circ - \hat{B}_1$ [sum of ∠'s in Δ][som binne∠e van Δ] maar/ but $\hat{B}_2 = 90^\circ - \hat{B}_1$ $\hat{O}_3 = \hat{B}_2$ [both/beide $= 90^\circ - \hat{B}_1$] ∴ RB is a tangent passing through T,O and B [converse tan chord theorem] ∴ RB is 'n raaklyn deur T, O en B [raaklyn koord stelling omgekeerde]	✓ S ✓R ✓ S ✓ R (4)
9.3.3	$\hat{Q}_2 = 90^\circ - \hat{Q}_1$ [tan ⊥ radius][radius ⊥ raaklyn]	✓ S/R ✓ S/R

	maar/ but $\hat{Q}_1 = \hat{B}_1$ [tan-chord theorem][raaklyn koord stelling] en/ and $\hat{Q}_3 = \hat{B}_1$ [∠'s opp = sides][∠e teenoor gelyke sye] In ΔPQB $\hat{P} + \hat{B}_1 + \hat{Q}_1 + \hat{Q}_2 = 180^\circ$ [sum of ∠'s in Δ][som binne∠e van Δ] $\hat{P} + \hat{B}_1 + \hat{B}_1 + 90^\circ - \hat{B}_1 + \hat{B}_1 = 180^\circ$ $\hat{P} = 90^\circ - 2\hat{B}_1$	✓ answer/antwoord (3)
		[26]

QUESTION 10 / VRAAG 10

		
10.1	$\frac{DG}{GC} = \frac{EH}{HC}$ [prop theorem , ED ∥ HG] [eweredigheidstelling] $\frac{3}{2} = \frac{EH}{HC}$	✓ S ✓ R (2)
10.2	$\frac{BG}{BD} = \frac{AB}{BE}$ [prop theorem, ED ∥ AG] [eweredigheidstelling] $\frac{BG}{BD} = \frac{3}{1}$ $\frac{\text{Area of } \Delta ABG}{\text{Area of } \Delta CAG} = \frac{\frac{1}{2}.BG.h}{\frac{1}{2}.GC.h} = \frac{\frac{9}{2}}{\frac{2}{1}}$ OR /OF $\frac{\frac{3}{1}}{\frac{4}{3}}$ $= \frac{9}{4}$	✓ S/ R ✓ S/ R ✓ answer/antwoord (3)
		[5]

QUESTION 11 / VRAAG 11

		
11.1	$\hat{R}_1 = \hat{T}_2$ [tan chord theorem] [raaklyn koord stelling]	✓ R (1)
11.2	1. $\hat{R}_1 = \hat{T}_2$ [proved] [bewys] $\hat{R}_3 = \hat{T}_2$ [alt <s, verw ∠e, QM||RS] $\therefore \hat{R}_3 = \hat{R}_1$ [$= \hat{T}_2$] 2. $T\hat{S}R = \hat{M}_3$ [ext < of cyclic quad] [buite∠ van KVH] 3. $\hat{T}_1 = \hat{Q}_2$ [sum of <s of △s] [som binne∠e van Δ] $\therefore \Delta RTS \text{ ||| } \triangle RQM$ [AAA] [HHH]	✓ S/R ✓ S ✓ S/R ✓ R (4)
11.3	$\frac{RT}{RQ} = \frac{TS}{QM}$ [||| Δ's] $RQ \times TS = QM \times RT$	✓ S/R (1)
11.4	$\frac{PQ}{QR} = \frac{PM}{MS}$ [$prop\ theoreom, QM\|\|RS$] [eweredigheidstelling] $\frac{QR}{RT} = \frac{QM}{ST}$ [△ ⫼] $\frac{PQ}{QR} \times \frac{QR}{RT} = \frac{PM}{MS} \times \frac{QM}{ST}$ $\frac{PQ}{RT} = \frac{PM}{MS} \times \frac{QM}{ST} = \frac{PM}{ST} \times \frac{QM}{MS}$ $\frac{PQ}{RT} = \frac{2}{3} \times \frac{1}{2}$ $= \frac{1}{3}$	✓ S/R ✓ S ✓ substitution/vervang ✓ answer/antwoord (4)
		[10]

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		TOTAL/TOTAAL:150



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