



Province of the  
**EASTERN CAPE**  
EDUCATION

Iphondo leMpuma Kapa: Isebe leMfundo  
Provinsie van die Oos Kaap: Departement van Onderwys  
Porafensie Ya Kapa Botjhabela: Lefapha la Thuto

LEARNER'S NAME/  
NAAM VAN LEERDER:

CLASS / KLAS:

**NATIONAL SENIOR CERTIFICATE/  
NASIONALE SENIOR SERTIFIKAAT**

**GRADE/GRAAD 12**

**JUNE/JUNIE 2025**

**TECHNICAL MATHEMATICS P2/TEGNIESE WISKUNDE V2  
SPECIAL ANSWER BOOK/SPEZIALE ANTWOORDEBOEK**

QUESTION/VRAAG	MARKS/PUNTE			HOD/HVD (Level 1 mod./Vlak 1 mod.)			DISTRICT/DISTRIK (Level 2 mod./Vlak 2 mod.)			PROVINCIAL/PROVINSIAAL (Level 3 mod./Vlak 3 mod.)		
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
TOTAL/TOTAAL												



This special answer book consists of 26 pages./  
Hierdie spesiale antwoordeboek bestaan uit 26 bladsye.

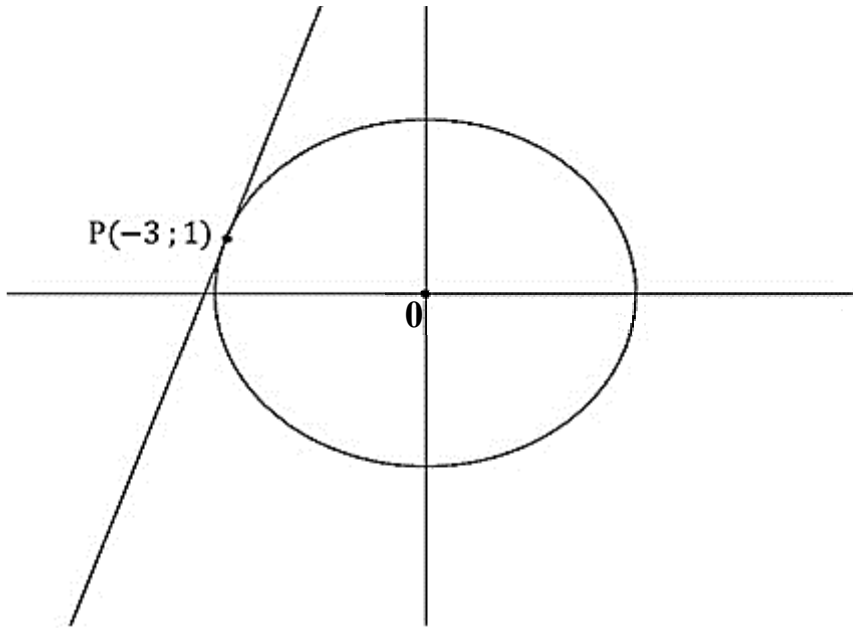
FOLLOW THESE INSTRUCTIONS CAREFULLY	VOLG HIERDIE INSTRUKSIES NOUKEURIG
<p>1. Answer ALL questions in the spaces provided.</p> <p>2. No pages may be torn from this answer book.</p> <p>3. Answers must be written in black/blue ink as distinctly as possible. Do not write in the margins.</p> <p>4. Indicate the questions you have answered by drawing a circle around the relevant numbers on the front cover of the answer book where marks are to be recorded.</p> <p>5. Draw a through any work/rough work that must not be marked.</p> <p>6. In the event that you use the additional space provided:</p> <p>6.1 Write down the number of the question</p> <p>6.2 Leave a line and rule off after your answer.</p>	<p>1. Beantwoord ALLE vrae in die ruimtes wat voorsien is.</p> <p>2. Geen bladsye mag uit hierdie antwoordeboek geskeur word nie.</p> <p>3. Skryf die antwoorde so duidelik moontlik met swart/blou ink. Moenie in die kantlyn skryf nie.</p> <p>4. Dui die vrae wat jy beantwoord het aan op die voorblad van die antwoordeboek waar die punte aangebring is, deur 'n kringetjie te trek om die nommers van die vrae wat jy beantwoord het.</p> <p>5. Trek 'n netjiese lyn deur enige werk/rofwerk wat nie nagesien moet word nie.</p> <p>6. Ingeval jy die bykomende ruimte wat voorsien word, gebruik:</p> <p>6.1 Skryf die nommer van die vraag neer.</p> <p>6.2 Laat 'n lyn oop en trek 'n lyn na jou antwoord.</p>

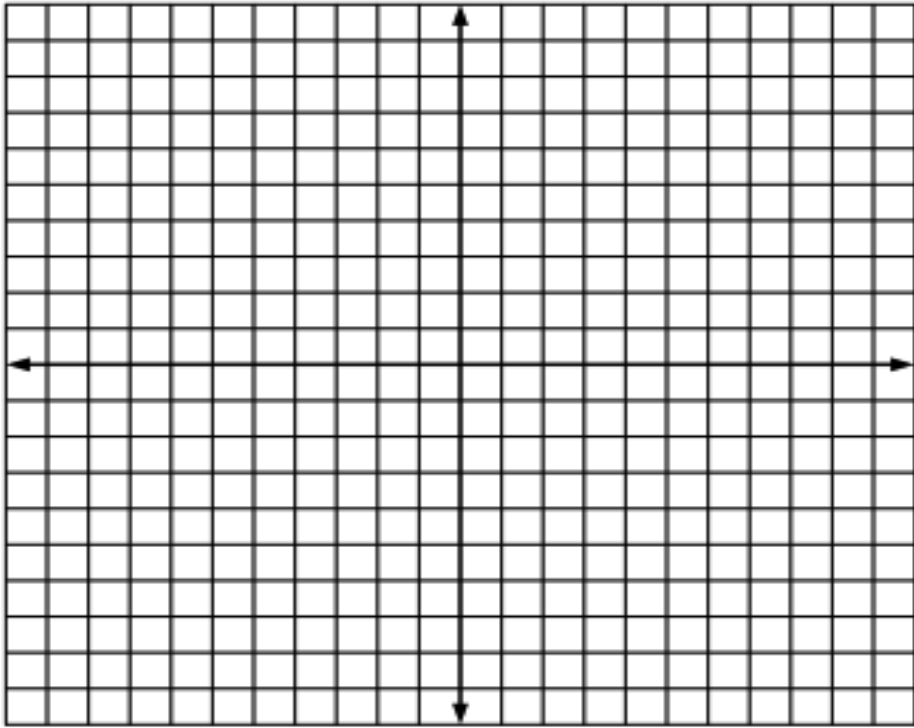
## QUESTION/VRAAG 1

	Solution/Oplissing	Marks/ Punte
1.1		(1)
1.2		(4)
1.3		(4)

	<b>Solution/Oplossing</b>	<b>Marks/ Punte</b>
1.4		(3)
1.5		(4)
		<b>[16]</b>

## QUESTION/VRAAG 2

	Solution/Oplissing	Marks/ Punte
		
2.1.1		(1)
2.1.2		(4)
2.1.3		(2)

	<b>Solution/<i>Oplossing</i></b>	<b>Marks/ <i>Punte</i></b>
2.2		(3)
		<b>[10]</b>

## QUESTION/VRAAG 3

	Solution/Oplissing	Marks/ Punte
3.1		
3.1.1	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	(3)
3.1.2	<div></div> <div></div>	(1)
3.1.3	<div></div> <div></div> <div></div> <div></div>	(2)

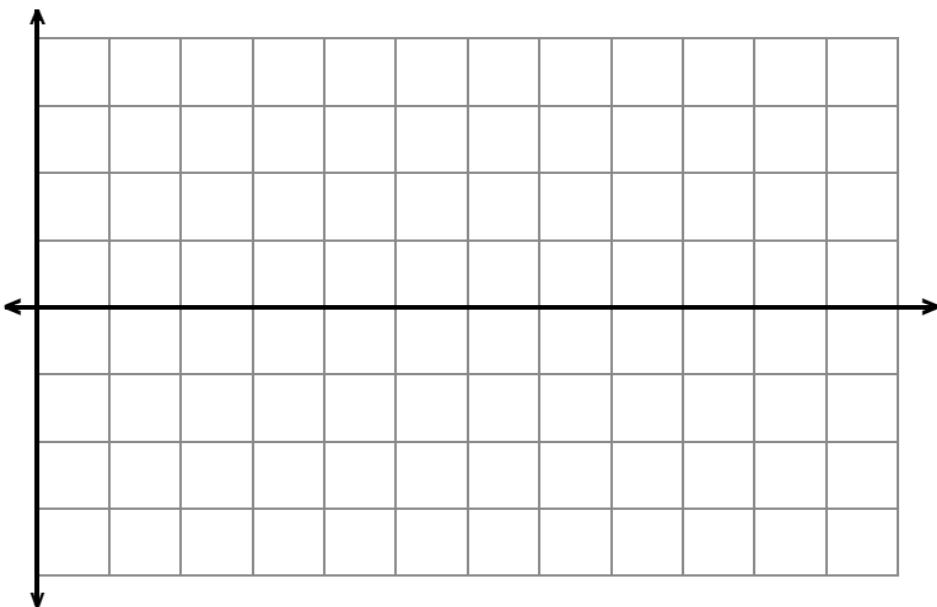
	<b>Solution/Oplossing</b>	<b>Marks/ Punte</b>
3.2		(4)
		<b>[10]</b>



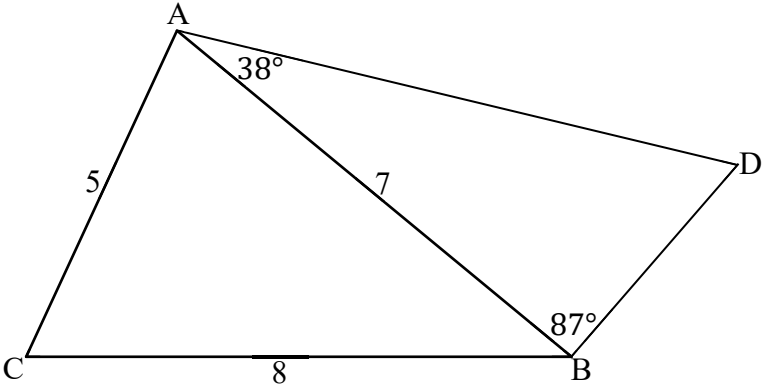
## QUESTION/VRAAG 4

	Solution/Oplissing	Marks/ Punte
4.1	$\frac{\tan(180^\circ - \theta) \cdot \cot(360^\circ - \theta) - \sin^2(180^\circ + \theta)}{\sec(180^\circ - \theta) \cdot \sec \theta + \tan^2 \theta}$	(7)
4.2	$\frac{\sin x}{-\operatorname{cosec} x} + \frac{\cos^2(x) \cdot \tan x}{\tan(180^\circ - x)} = -1$	(6)
		[13]

## QUESTION/VRAAG 5

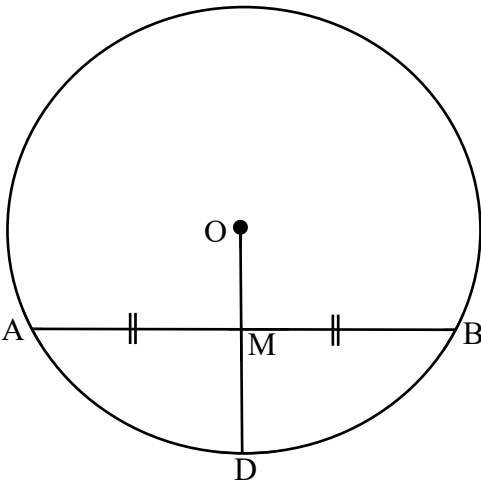
	Solution/Oplossing	Marks/ Punte
5.1		(8)
5.2		(2)
5.3		(2)
5.4.1		(2)
5.4.2		(2)
		[16]

## QUESTION/VRAAG 6

	Solution/Oplissing	Marks/ Punte
		
6.1		(1)
6.2		(3)
6.3		(3)

	<b>Solution/<i>Oplossing</i></b>	<b>Marks/ <i>Punte</i></b>
6.4		(3)
6.5		(4)
		<b>[14]</b>

## QUESTION/VRAAG 7

	Solution/Oplissing	Marks/ Punte
		
7.1		(1)
7.2		(1)
7.3		(1)
7.4		(5)
7.5		(4)

	<b>Solution/<i>Oplossing</i></b>	<b>Marks/ <i>Punte</i></b>
7.6		(2)
		<b>[14]</b>

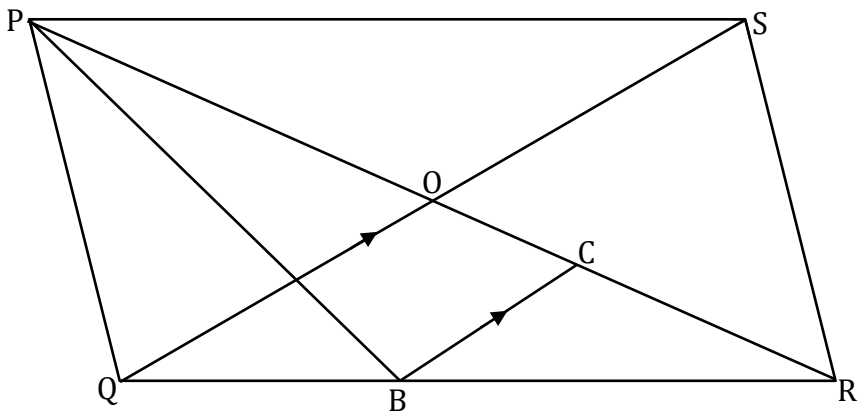
## QUESTION/VRAAG 8

	Solution/Oplissing	Marks/ Punte
8.1		(2)
8.2		(2)
8.3		(2)
8.4		(2)
8.5		(2)
8.6		(2)
		[12]

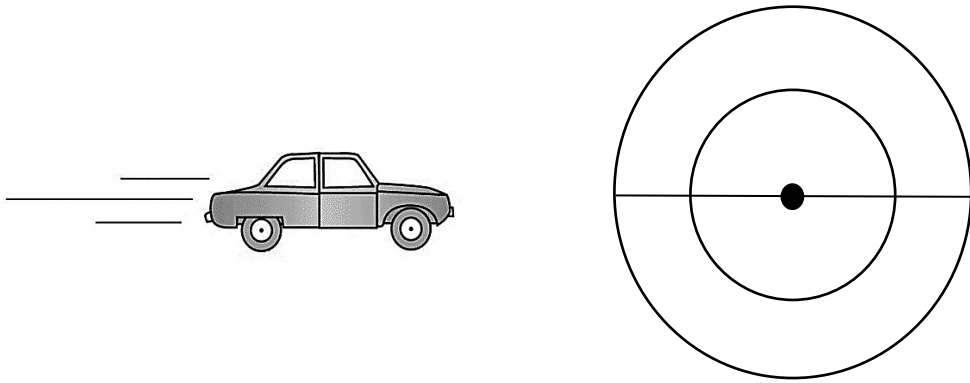
## QUESTION/VRAAG 9

	Solution/Oplissing	Marks/ Punte
9.1		
9.1.1	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	(4)
9.1.2	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	(4)



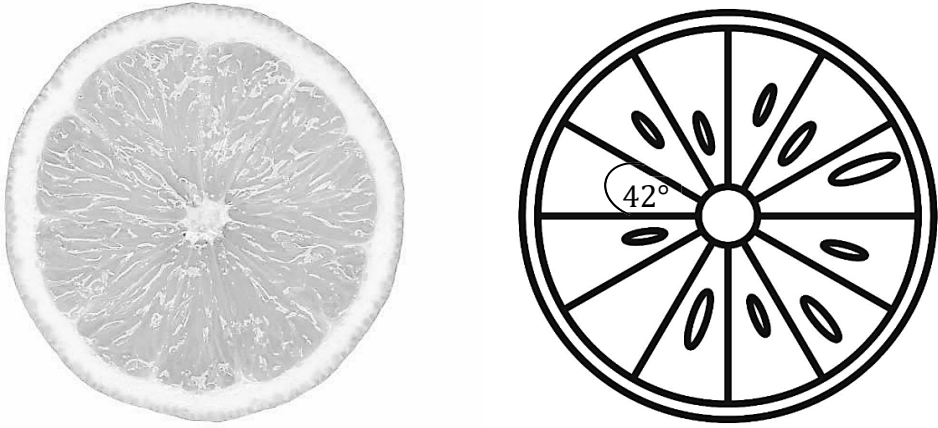
	Solution/Oplissing	Marks/ Punte
9.2		
		(4)
		<b>[12]</b>


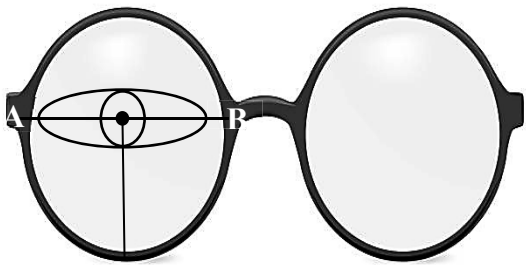
## QUESTION/VRAAG 10

	Solution/Oplissing	Marks/ Punte
		
10.1	<div></div> <div></div> <div></div> <div></div> <div></div>	(2)
10.2	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	(4)
10.3	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	(3)

	<b>Solution/<i>Oplossing</i></b>	<b>Marks/ <i>Punte</i></b>
10.4		(3)
10.5		(3)
		<b>[15]</b>

## QUESTION/VRAAG 11

	Solution/Oplissing	Marks/ Punte
11.1		
11.1.1	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	(4)
11.1.2	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	(3)
11.1.3	<div></div> <div></div> <div></div>	(2)

	Solution/Oplissing	Marks/ Punte
11.2	 	
	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	(5)

	Solution/Oplissing	Marks/ Punte
11.3		
		(4)
		[18]
	TOTAL/TOTAAL:	150



	Additional Space/ <i>Addisionele Ruimte</i>	Marks/ <i>Punte</i>



[illegible]

	Additional Space/ <i>Addisionele Ruimte</i>	Marks/ <i>Punte</i>











