



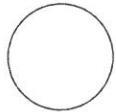
# basic education

Department:  
Basic Education  
**REPUBLIC OF SOUTH AFRICA**

Candidate Barcode Label/Kandidaat se Stafieskodeplakker

## NSC Answer Book NSS-antwoordeboek

National Senior Certificate/Nasionale Senior Sertifikaat (Grade 12/Graad 12)



Sequence No. on mark sheet  
Volgnummer op puntestaat

CENTRE NUMBER <b>SENTRUMNOMMER</b>						
EXAMINATION NUMBER <b>EKSAMEENNOMMER</b>						
DATE <b>DATUM</b>						
SUBJECT CODE <b>VAKKODE</b>						
SUBJECT NAME <b>VAKNAAM</b>	<b>MATHEMATICS/WISKUNDE</b>					
BOOK NUMBER <b>BOEKNOMMER</b>		OF <b>VAN</b>		BOOKS <b>BOEKE</b>		
PAPER NUMBER <b>VRAESTELNOMMER</b>	2					

This answer book consists of 28 pages./Hierdie antwoordeboek bestaan uit 28 bladsye.

MARKER/NASIENER			MODERATOR'S INITIALS IN RELEVANT BLOCK <i>MODERATORPARAAF IN BETROKKIE BLOKKIE</i>					
Question <i>Vraag</i>	Marks <i>Punte</i>	Marker's Code & Initials	Marks <i>Punte</i>	SM	DCM	CM	IM	EM
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

RE-MARK/RE-CHECK <i>HERNASIEN/HERKONTROLEER</i>		
Question <i>Vraag</i>	Marks <i>Punte</i>	Initials <i>Paraaf</i>
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		

	TOTAL <b>TOTAAL</b>		

TOTAL <b>TOTAAL</b>		
HASH TOTAL <b>KAFDTOTAAL</b>		

CONTROLLED AND CERTIFIED CORRECT  
SURNAME AND INITIALS OF EA

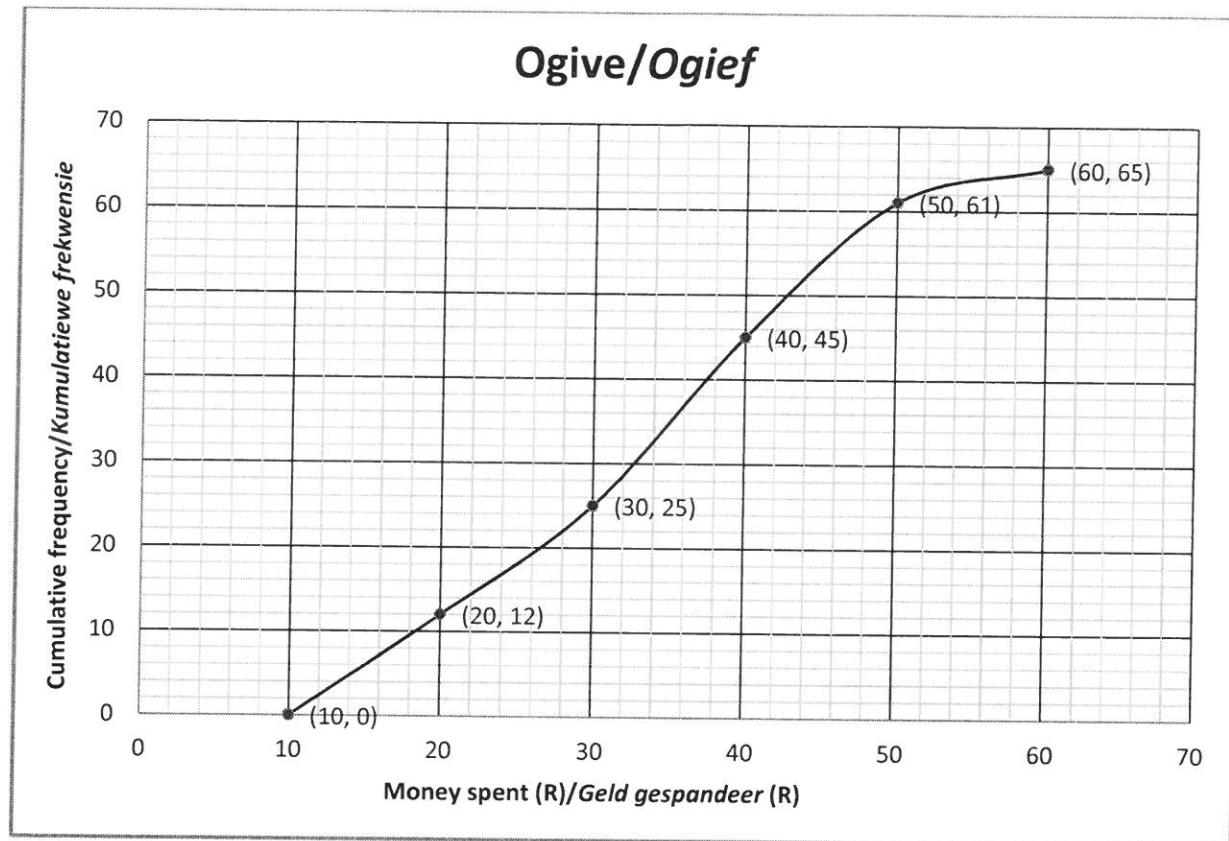
PLEASE READ INSTRUCTIONS ON THE NEXT PAGE  
LEES ASSEBLEEF INSTRUKSIES OP VOLGENDE BLADSY

**PLEASE FOLLOW THESE INSTRUCTIONS CAREFULLY**

1. Write your examination number and centre number clearly in the spaces provided and attach your examination number sticker in the space provided.
2. Remember that your own name (or the name of your school) may not appear anywhere on or in this answer book.
3. Answer ALL questions in the spaces provided.
4. No pages may be torn from this answer book.
5. Read the instructions printed on your timetable carefully as well as any other instructions which may be given in each examination paper.
6. Candidates may not retain an answer book or remove it from the examination room. Answer books must be returned to the Invigilator at the end of the examination session.
7. Answers must be written in black/blue ink as distinctly as possible. Do not write in the margins.
8. 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.
9. Rule off through any work/rough work that must not be marked.
10. In the event that you use the additional space provided:
  - 10.1 Write down the number of the question.
  - 10.2 Leave a line and rule off after your answer.

**VOLG ASSEBLIEF HIERDIE INSTRUKSIES NOUKEURIG**

1. Skryf jou eksamennummer en sentrumnommer duidelik in die ruimtes soos verskaf en plak jou eksamennummeretiket in die ruimte soos verskaf.
2. Onthou dat jou eie naam (of die naam van jou skool) nie op of in hierdie antwoordeboek mag voorkom nie.
3. Beantwoord ALLE vrae in die ruimtes wat voorsien is.
4. Geen bladsye mag uit hierdie antwoordeboek geskeur word nie.
5. Lees die instruksies wat op jou eksamenrooster gedruk is sorgvuldig deur, asook enige ander instruksies wat in elke eksamenvraestel gegee word.
6. Geen antwoordeboek mag deur die kandidaat behou of uit die eksamenlokaal verwijder word nie. Antwoordeboeke moet aan die Toesighouer terugbesorg word aan die einde van die eksamensessie.
7. Skryf die antwoorde so duidelik moontlik met swart/blou ink. Moenie in die kantlyn skryf nie.
8. Dui die vrae wat jy beantwoord het aan op die voorblad van die antwoordeboek waar die punte aangebring word, deur 'n kringetjie te trek om die nommers van die vrae wat jy beantwoord het.
9. Trek 'n netjiese lyn deur enige werk/rofwerk wat nie nagesien moet word nie.
10. In geval jy die addisionele ruimte wat voorsien word, gebruik:
  - 10.1 Skryf die nommer van die vraag neer.
  - 10.2 Laat 'n lyn oop en trek 'n lyn na jou antwoord.

**QUESTION/VRAAG 1**

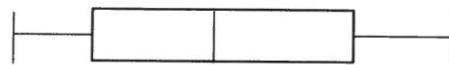
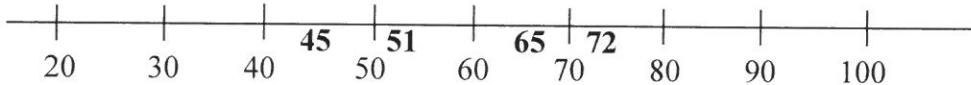
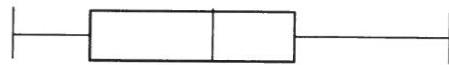
Amount of money (in R) Bedrag geld (in R)	$10 \leq x < 20$	$20 \leq x < 30$	$30 \leq x < 40$	$40 \leq x < 50$	$50 \leq x < 60$
Frequency Frekwensie	$a$	13	20	$b$	4

	Solution/Oplossing	Marks Punte
1.1		
1.2		(1)
		(1)

	<b>Solution/<i>Oplossing</i></b>	<b>Marks <i>Punte</i></b>
1.3		
1.4		(2)
		[6]

**QUESTION/VRAAG 2**

2.1

**Class/Klas A****Class/Klas B**

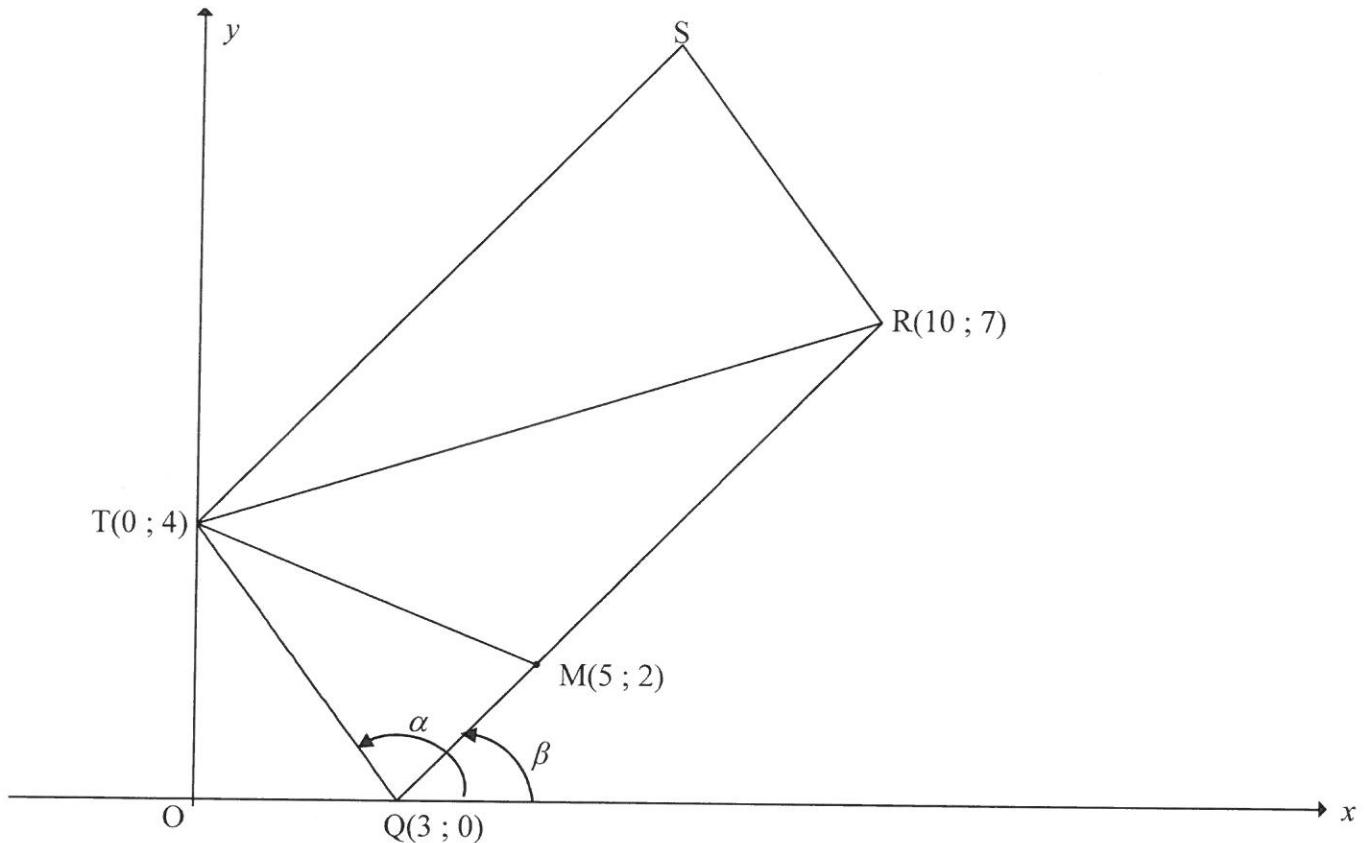
	<b>Solution/<i>Oplossing</i></b>	<b>Marks <i>Punte</i></b>
2.1.1		(2)
2.1.2		(2)

	<b>Solution/Oplossing</b>	<b>Marks/Punte</b>
2.1.3		(2)

2.2

<b>COUPLE/PAAR</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
<b>JUDGE 1/ BEOORDELAAR 1</b>	18	4	6	8	5	12	10	14
<b>JUDGE 2/ BEOORDELAAR 2</b>	15	6	3	5	5	14	8	15

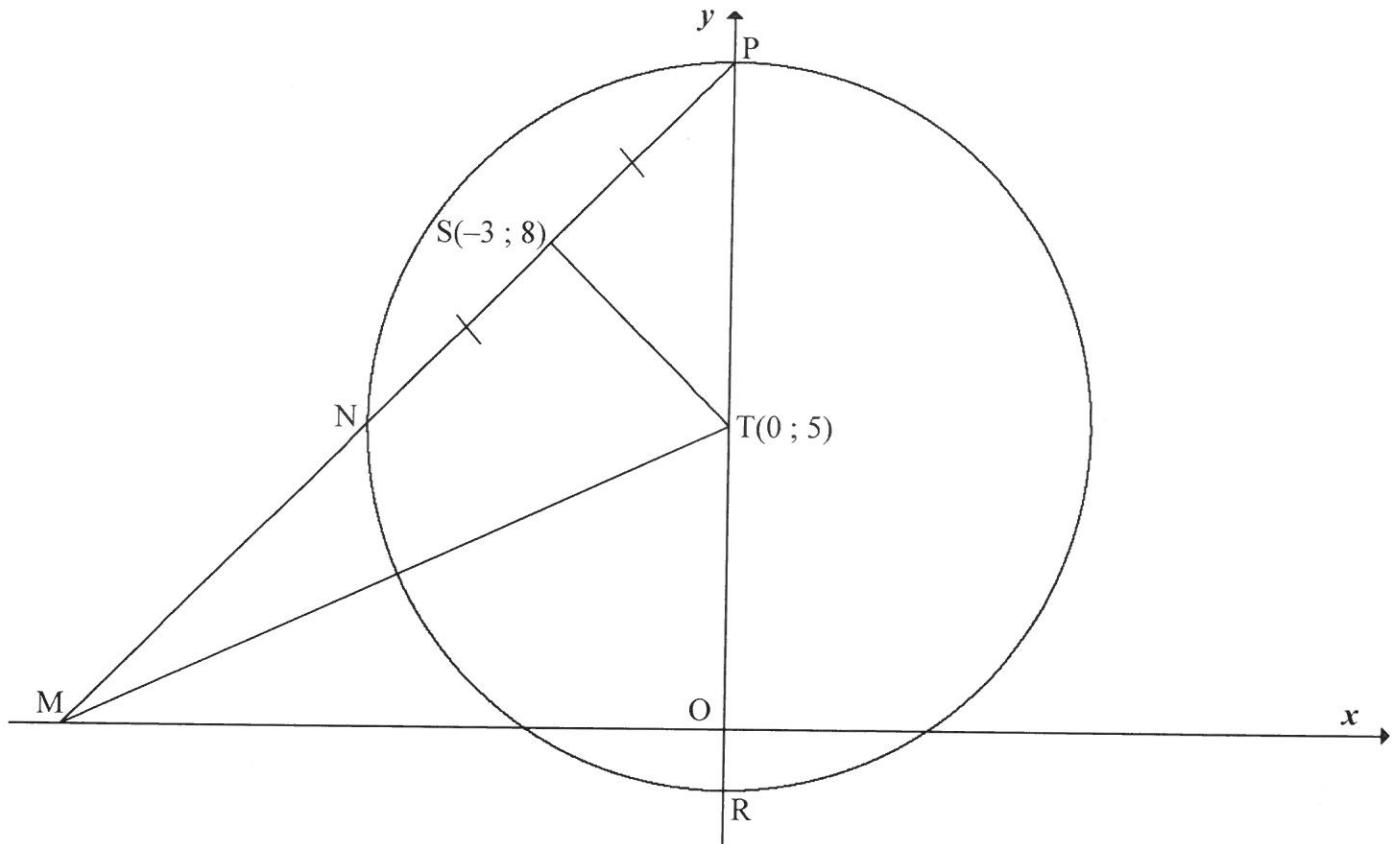
	<b>Solution/Oplossing</b>	<b>Marks/Punte</b>
2.2.1		(3)
2.2.2		(2)
2.2.3		(2) [13]

**QUESTION/VRAAG 3**

	<b>Solution/Oplossing</b>	<b>Marks/Punte</b>
3.1		
3.2		(1)
		(2)

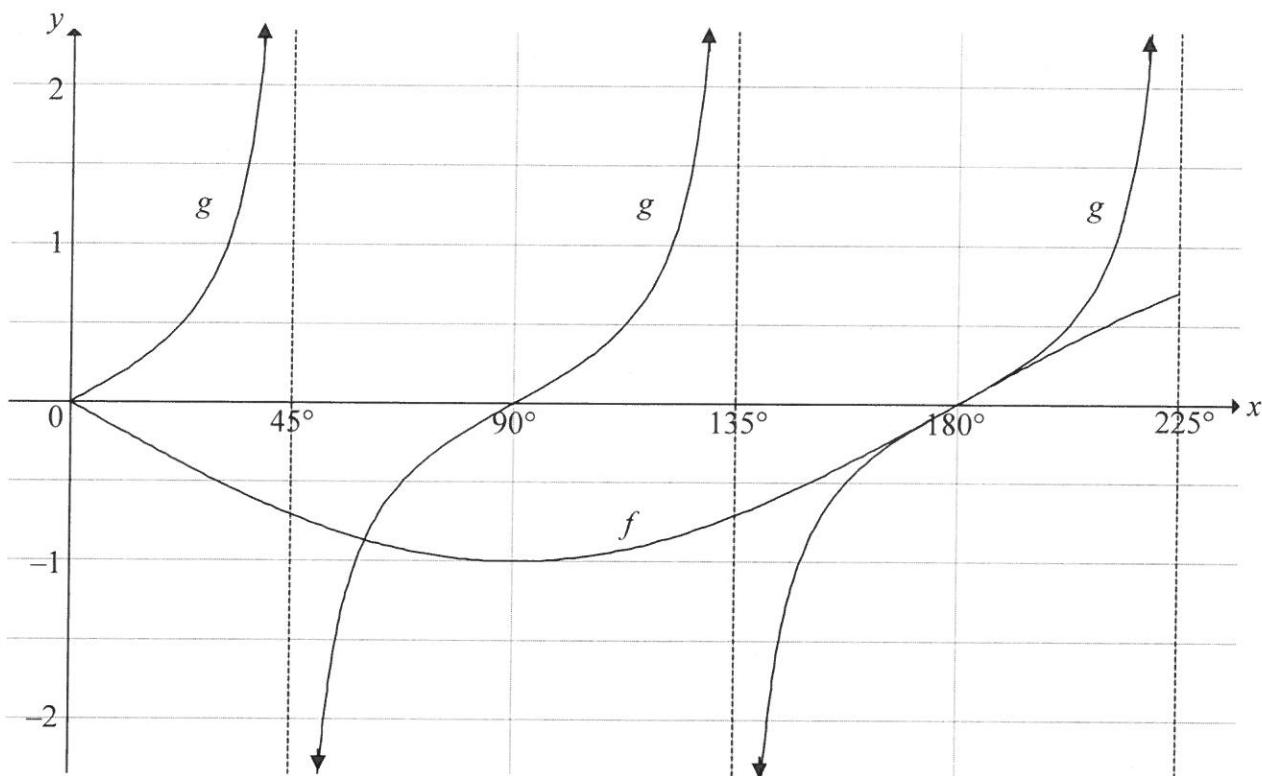
	<b>Solution/<i>Oplossing</i></b>	<b>Marks/ <i>Punte</i></b>
3.3		
3.4		(4)

	<b>Solution/<i>Oplossing</i></b>	<b>Marks/ Punte</b>
3.5		
3.6.1		(6)
3.6.2		(3)
		(3)
		[23]

**QUESTION/VRAAG 4**

	<b>Solution/<i>Oplossing</i></b>	<b>Marks/ Punte</b>
4.1		(1)
4.2		(5)

	<b>Solution/<i>Oplossing</i></b>	<b>Marks/ Punte</b>
4.3		
4.4		(4)
4.5		(4)
		(5)
		[19]

**QUESTION/VRAAG 5**

	<b>Solution/Oplossing</b>	<b>Marks/Punte</b>
5.1		
5.2		(2)
		(2)

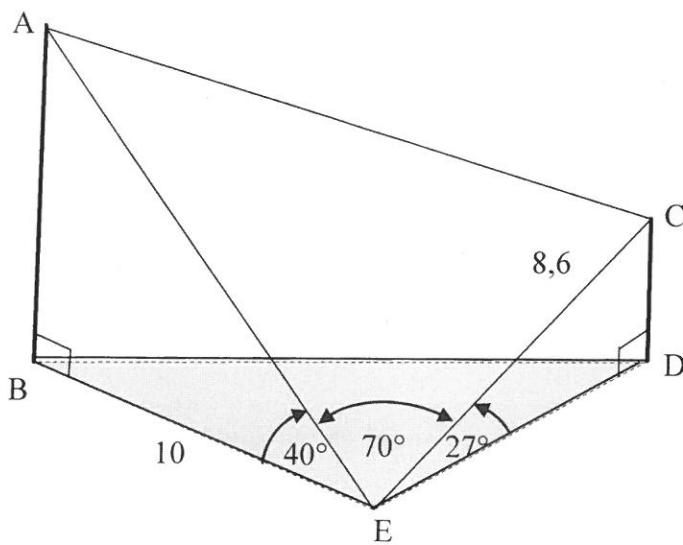
	<b>Solution/<i>Oplossing</i></b>	<b>Marks <i>Punte</i></b>
5.3		(3) [7]

**QUESTION/VRAAG 6**

	<b>Solution/<i>Oplossing</i></b>	<b>Marks <i>Punte</i></b>
6.1.1		(1)
6.1.2		(2)
6.2		

	<b>Solution/<i>Oplossing</i></b>	<b>Marks/ <i>Punte</i></b>
6.2 (contd/ vervolg)		(4)
6.3		(6)
6.4.1		(4)

	Solution/ <i>Oplossing</i>	Marks/ <i>Punte</i>
6.4.2		(6) [23]

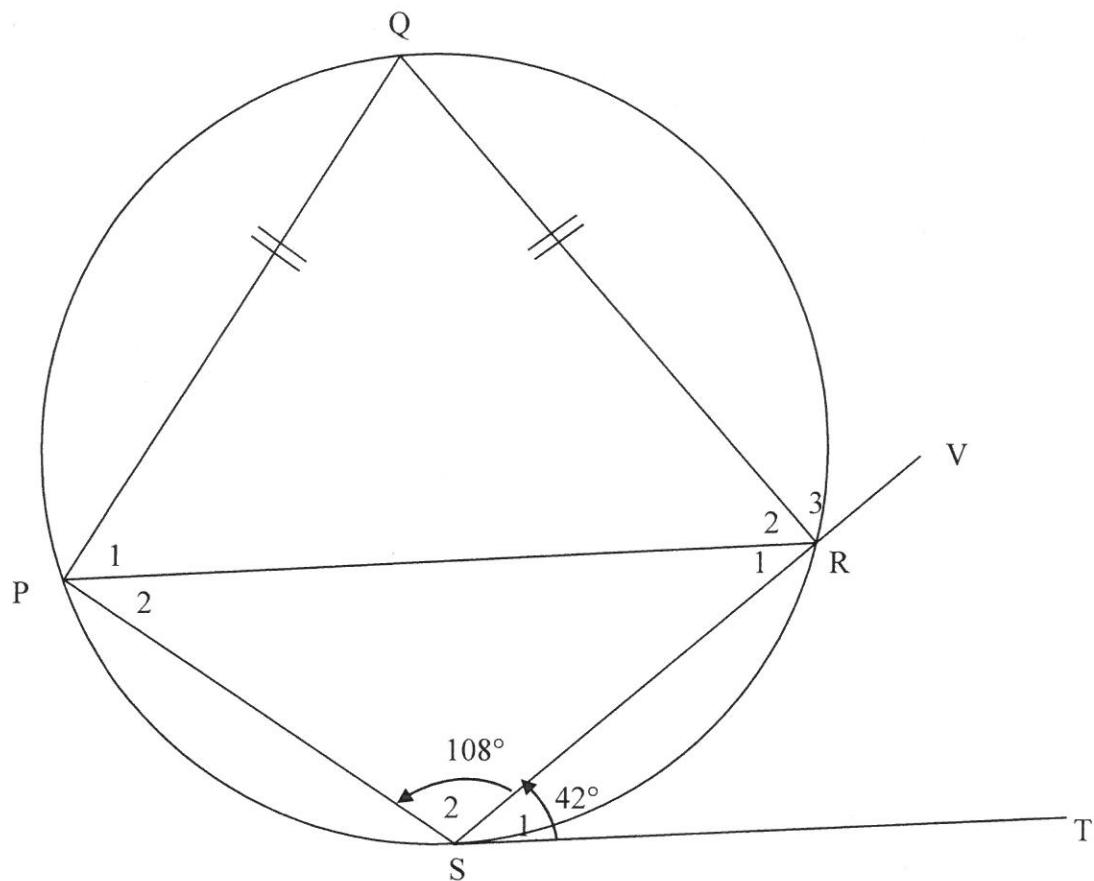
**QUESTION/VRAAG 7**

	<b>Solution/Oplossing</b>	<b>Marks/Punte</b>
7.1		
7.2		(2)

	<b>Solution/<i>Oplossing</i></b>	<b>Marks/ Punte</b>
7.3		(4) <b>[8]</b>

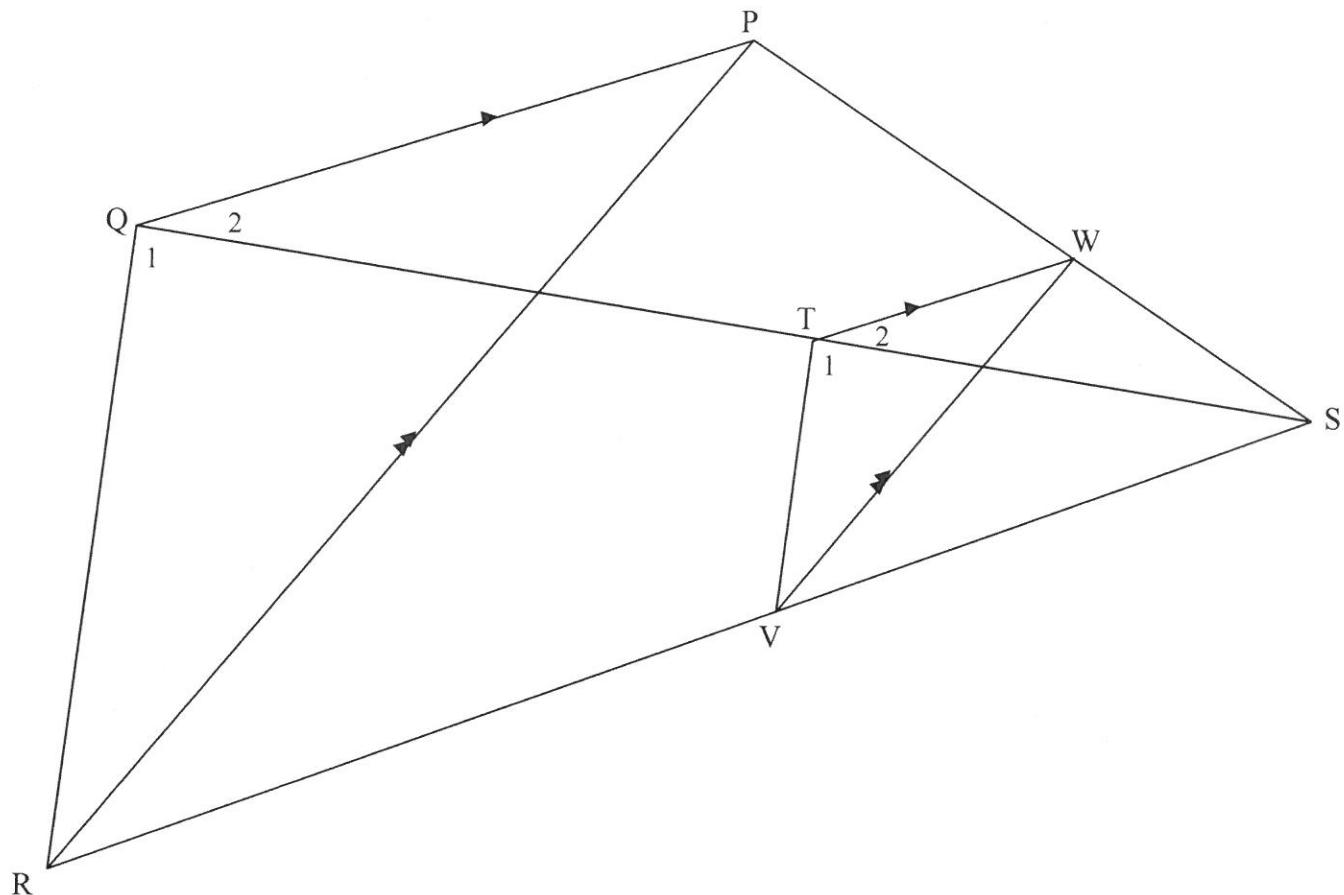
Give reasons for your statements and calculations in QUESTIONS 8, 9, 10 and 11.  
 Gee redes vir jou bewerings en berekeninge in VRAAG 8, 9, 10 en 11.

**QUESTION/VRAAG 8**



	<b>Solution/Oplossing</b>	<b>Marks/Punte</b>
8.1		(2)
8.2		(2)

	<b>Solution/<i>Oplossing</i></b>	<b>Marks/ <i>Punte</i></b>
8.3		(2)
8.4		(2) [8]

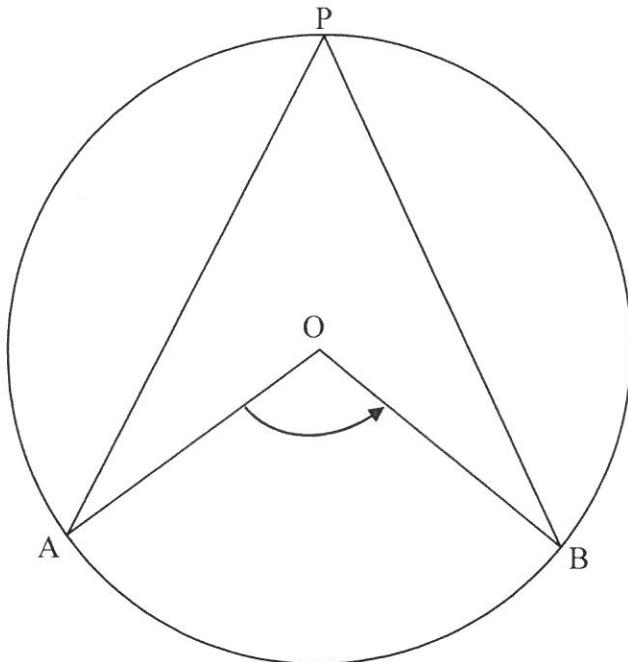
**QUESTION/VRAAG 9**

	<b>Solution/Oplossing</b>	<b>Marks/Punte</b>
9.1.1		
9.1.2		(1)

	<b>Solution/<i>Oplossing</i></b>	<b>Marks <i>Punte</i></b>
9.2		
9.3		(4)
9.4		(1)
		(2)
		<b>[10]</b>

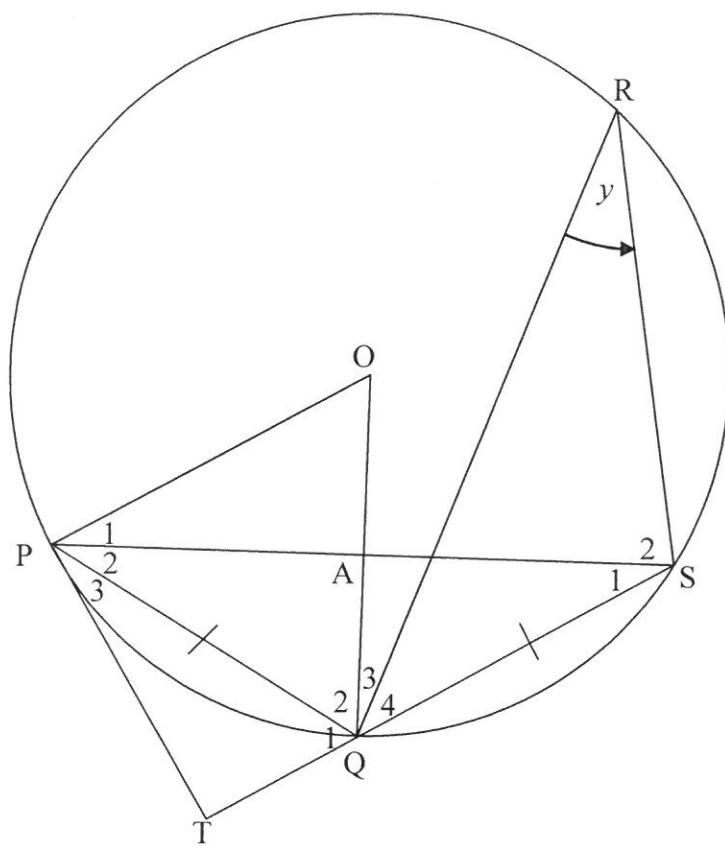
**QUESTION/VRAAG 10**

10.1



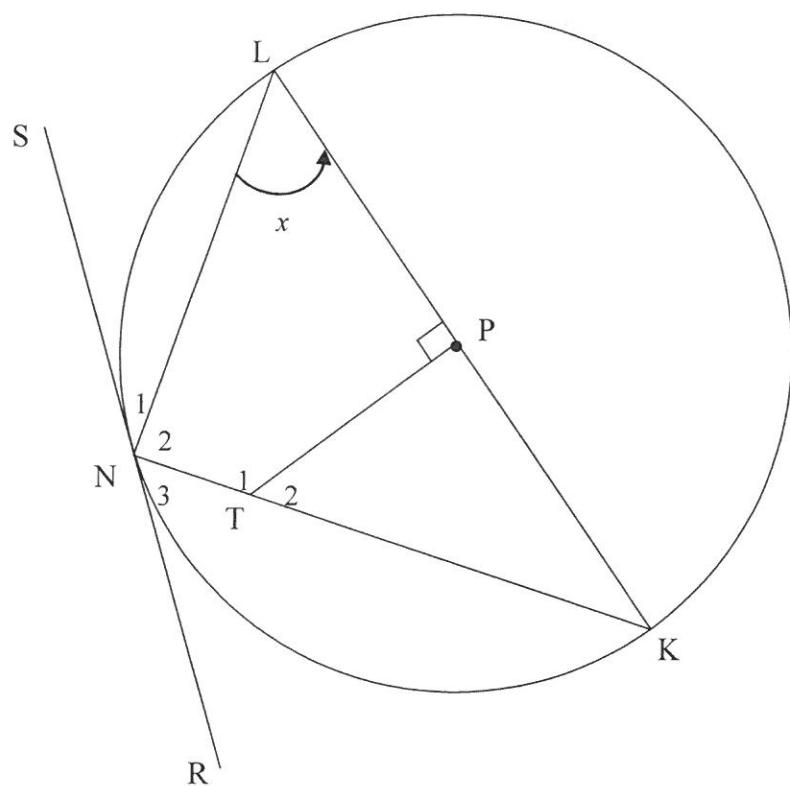
	<b>Solution/Oplossing</b>	<b>Marks/Punte</b>
		(5)

10.2



	<b>Solution/Oplossing</b>	<b>Marks/Punte</b>
10.2.1		(1)
10.2.2		(4)

	<b>Solution/<i>Oplossing</i></b>	<b>Marks <i>Punte</i></b>
10.2.3		
10.2.4		(2)
10.2.5		(2)
		(5)
		[19]

**QUESTION/VRAAG 11**

	<b>Solution/Oplossing</b>	<b>Marks/Punte</b>
11.1		
11.2		(3)

	<b>Solution/<i>Oplossing</i></b>	<b>Marks/ <i>Punte</i></b>
11.3.1		(3)
11.3.2		(5) [14]

	Additional space/Addisionele ruimte	Marks/Punte

	<b>Additional space/Addisionele ruimte</b>	<b>Marks/Punte</b>

	Additional space/Addisionele ruimte	Marks/Punte

**TOTAL/TOTAAL:** 150