



# basic education

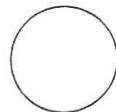
Department:  
Basic Education  
**REPUBLIC OF SOUTH AFRICA**

Candidate Barcode Sticker/Kandidaat-stafiekodeplakker

## SENIOR CERTIFICATE EXAMINATIONS/ *SENIORSERTIFIKAAT-EKSAMEN*

### MATHEMATICS P2/WISKUNDE V2

### ANSWER BOOK/ANTWOORDEBOEK



Sequence No. on mark sheet  
Volgnummer op puntestaat

CENTRE NUMBER <i>SENTRUMNOMMER</i>							
---------------------------------------	--	--	--	--	--	--	--

EXAMINATION NUMBER <i>EKSAMENNOMMER</i>								
--	--	--	--	--	--	--	--	--

DATE <i>DATUM</i>						
----------------------	--	--	--	--	--	--

BOOK NUMBER <i>BOEKNOMMER</i>		OF <i>VAN</i>		BOOKS <i>BOEKE</i>
----------------------------------	--	------------------	--	-----------------------

SUBJECT CODE <i>VAKKODE</i>				
--------------------------------	--	--	--	--

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 and Initials <i>Nasienerkode en -paraaf</i>	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								

			TOTAL <i>TOTAAL</i>			

			TOTAL <i>TOTAAL</i>			
			HASH TOTAL <i>KAFTOTAAL</i>			

CONTROLLED AND CERTIFIED AS CORRECT (SURNAME AND INITIALS OF EA)  
GEKONTROLEER EN AS KORREK GESERTIFISEER (VAN EN VOORLETTERS VAN EA)

This answer book consists of 27 pages./Hierdie antwoordeboek bestaan uit 27 bladsye.

Copyright reserved/Kopiereg voorbehou

Please turn over/Blaai om asseblief

**PLEASE FOLLOW THESE INSTRUCTIONS CAREFULLY**

1. Your examination number and centre number must be clearly written in the space 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 eksamen nommer en sentrum nommer duidelik in die ruimtes soos verskaf en plak jou eksamen nommer etiket 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 verwys 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**

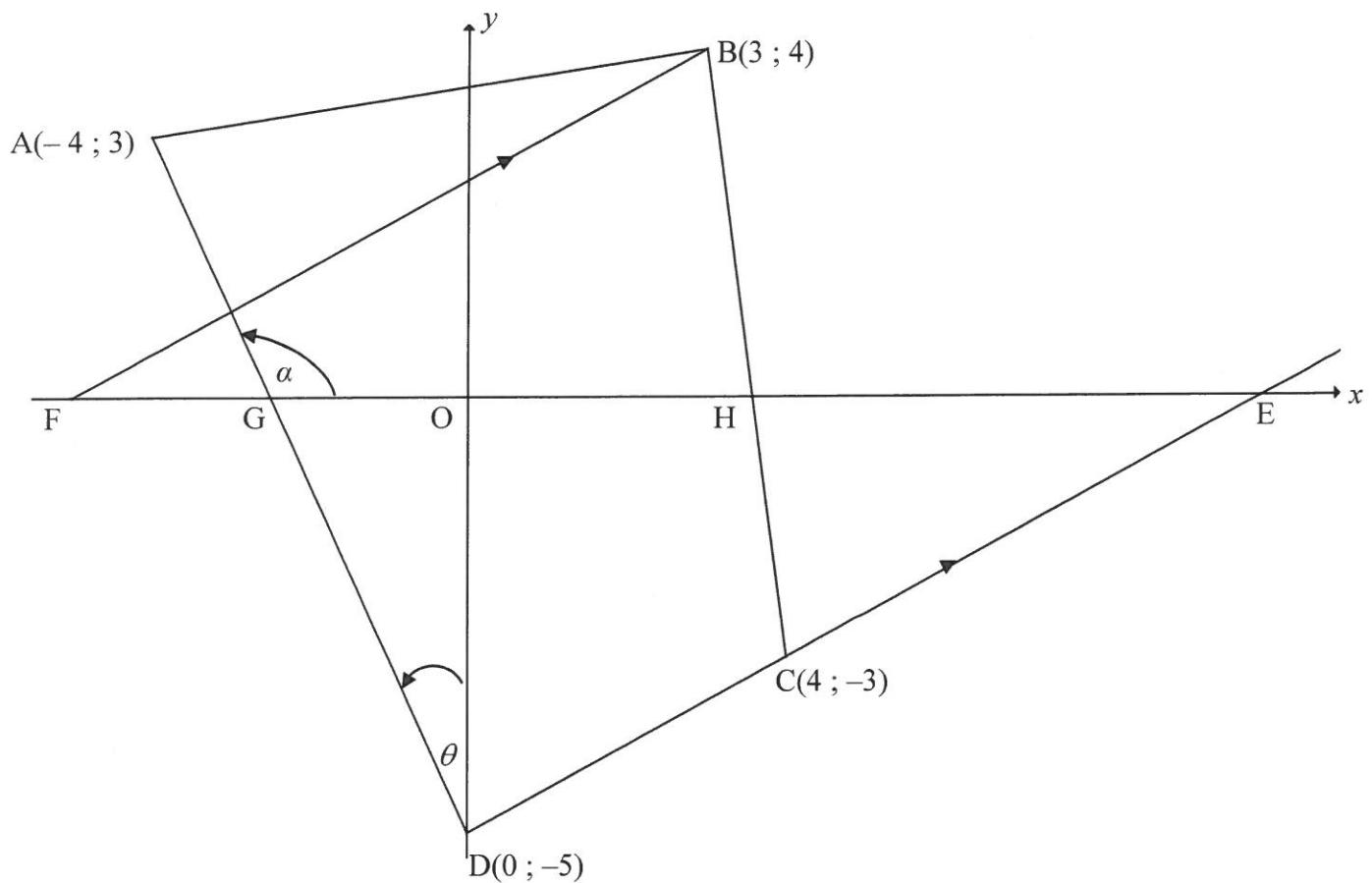
<b>TIME TAKEN (IN HOURS) TYD GENEEM (IN UUR)</b>	5	7	5	8	10	13	15	20	18	25	23
<b>COST/KOSTE (IN THOUSANDS OF RANDS) (IN DUISENDE RAND)</b>	10	10	15	12	20	25	28	32	28	40	30

	<b>Solution/Oplossing</b>	<b>Marks Punte</b>
1.1		
1.2		(3)
1.3		(2)
1.4		(1)
		(2)
		[8]

**QUESTION/VRAAG 2**

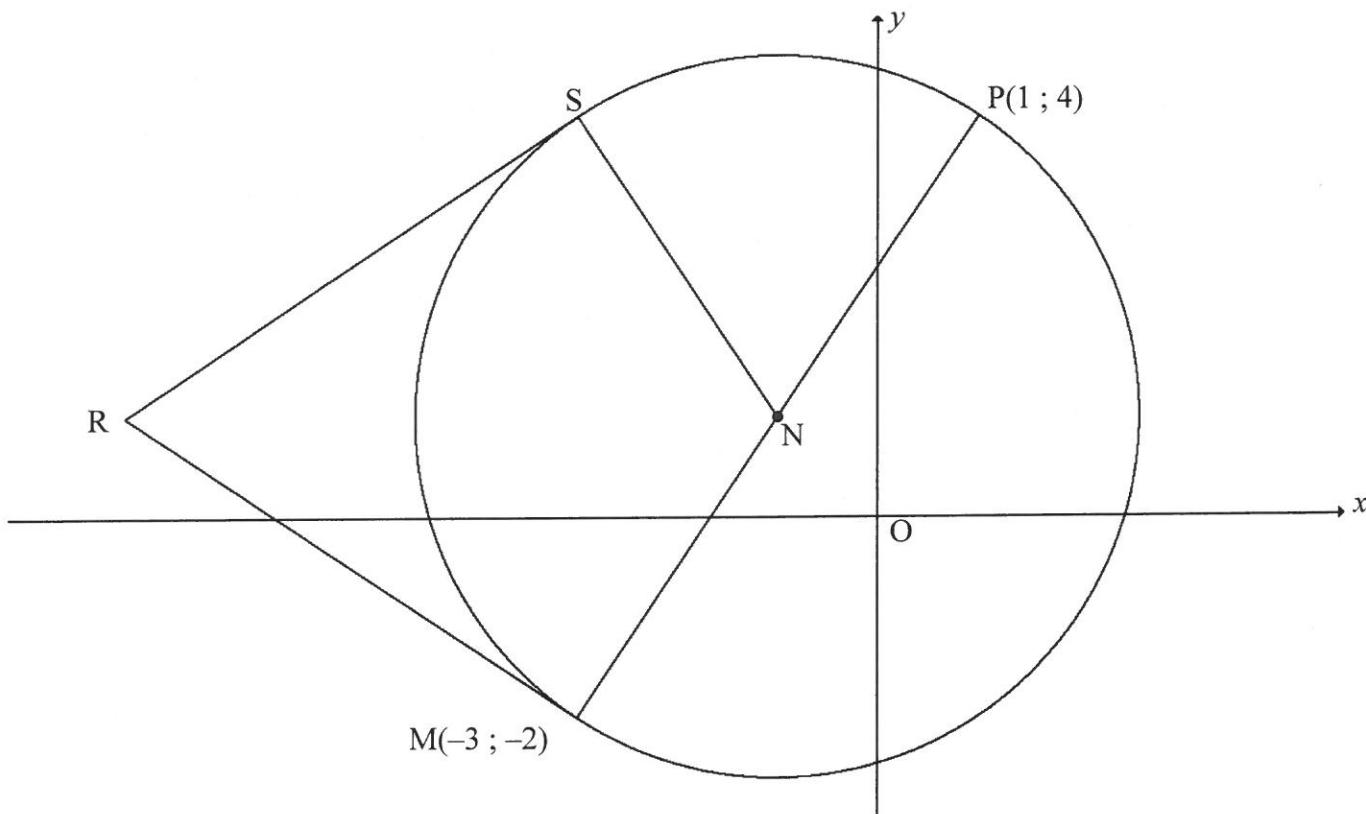
	<b>Solution/<i>Oplossing</i></b>	<b>Marks/ Punte</b>																		
2.1																				
2.2	<table border="1"> <thead> <tr> <th><b>Commission earned (in thousands of rands)</b> <i>Kommissie verdien (in duisende rand)</i></th> <th><b>Frequency Frekwensie</b></th> <th><b>Cumulative frequency Kumulatiewe frekwensie</b></th> </tr> </thead> <tbody> <tr> <td><math>20 &lt; x \leq 40</math></td><td>7</td><td></td></tr> <tr> <td><math>40 &lt; x \leq 60</math></td><td>6</td><td></td></tr> <tr> <td><math>60 &lt; x \leq 80</math></td><td>8</td><td></td></tr> <tr> <td><math>80 &lt; x \leq 100</math></td><td>10</td><td></td></tr> <tr> <td><math>100 &lt; x \leq 120</math></td><td>4</td><td></td></tr> </tbody> </table>	<b>Commission earned (in thousands of rands)</b> <i>Kommissie verdien (in duisende rand)</i>	<b>Frequency Frekwensie</b>	<b>Cumulative frequency Kumulatiewe frekwensie</b>	$20 < x \leq 40$	7		$40 < x \leq 60$	6		$60 < x \leq 80$	8		$80 < x \leq 100$	10		$100 < x \leq 120$	4		(1)
<b>Commission earned (in thousands of rands)</b> <i>Kommissie verdien (in duisende rand)</i>	<b>Frequency Frekwensie</b>	<b>Cumulative frequency Kumulatiewe frekwensie</b>																		
$20 < x \leq 40$	7																			
$40 < x \leq 60$	6																			
$60 < x \leq 80$	8																			
$80 < x \leq 100$	10																			
$100 < x \leq 120$	4																			
2.3	<p style="text-align: center;"><b>OGIVE/OGIEF</b></p>	(2)																		

	<b>Solution/<i>Oplossing</i></b>	<b>Marks/ Punte</b>
2.4		(2)
2.5		(3) <b>[12]</b>

**QUESTION/VRAAG 3**

	<b>Solution/Oplossing</b>	<b>Marks/ Punte</b>
3.1		(2)
3.2		(3)

	<b>Solution/Oplossing</b>	<b>Marks/ Punte</b>
3.3		(4)
3.4		(3)
3.5		(3)
3.6		(2)
		[17]

**QUESTION/VRAAG 4**

	<b>Solution/Oplossing</b>	<b>Marks/Punte</b>
4.1		(3)
4.2		(4)

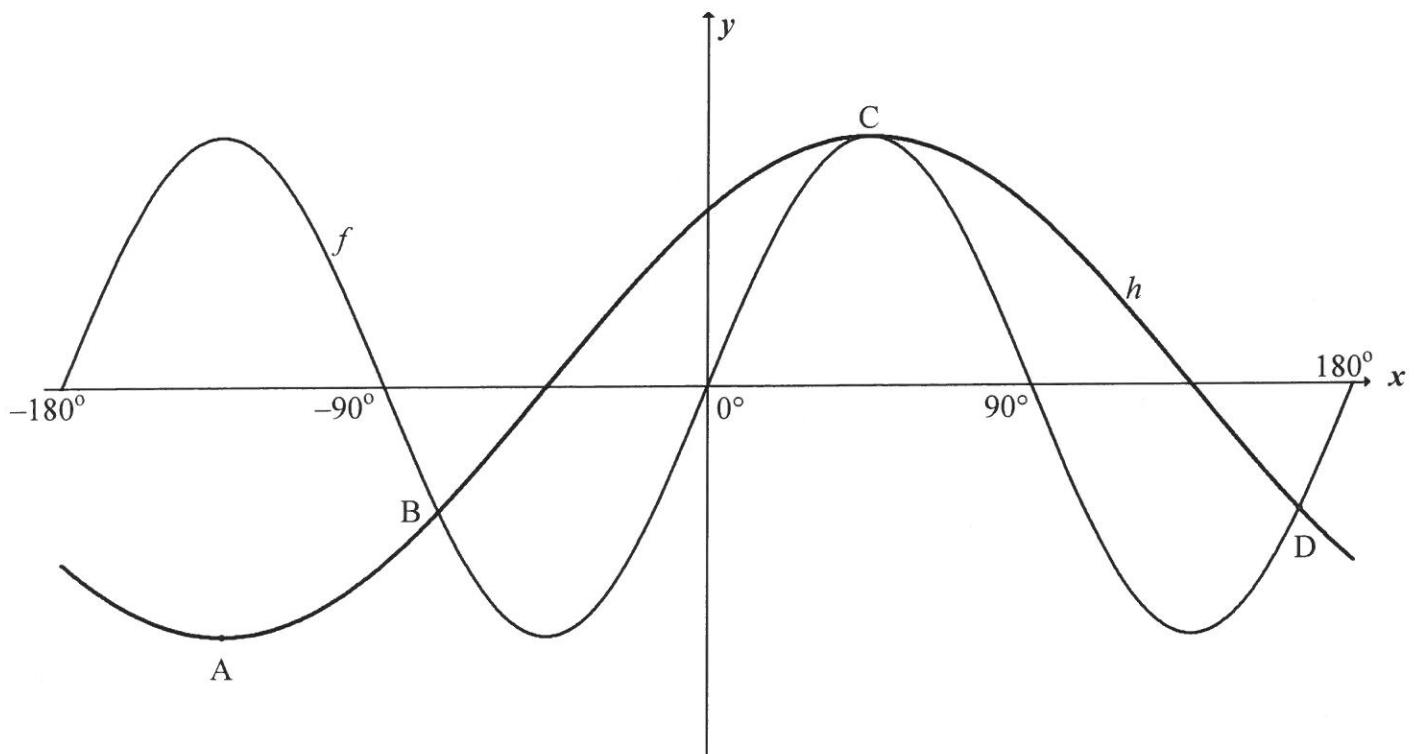
	<b>Solution/Oplossing</b>	<b>Marks/Punte</b>
4.3		
4.4		(5)
4.5		(2)
4.6		(4)
		(4)
		[22]

**QUESTION/VRAAG 5**

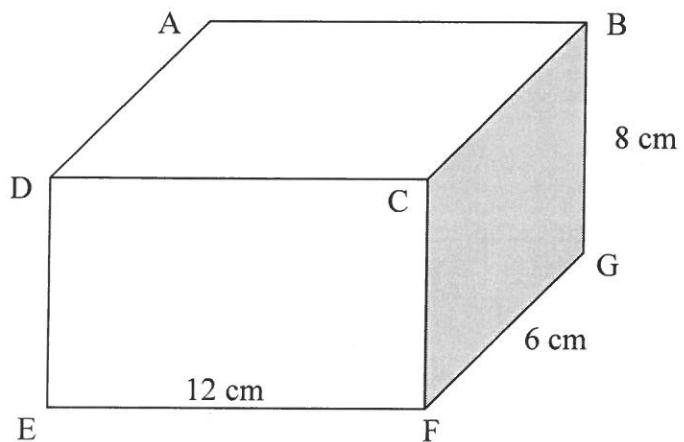
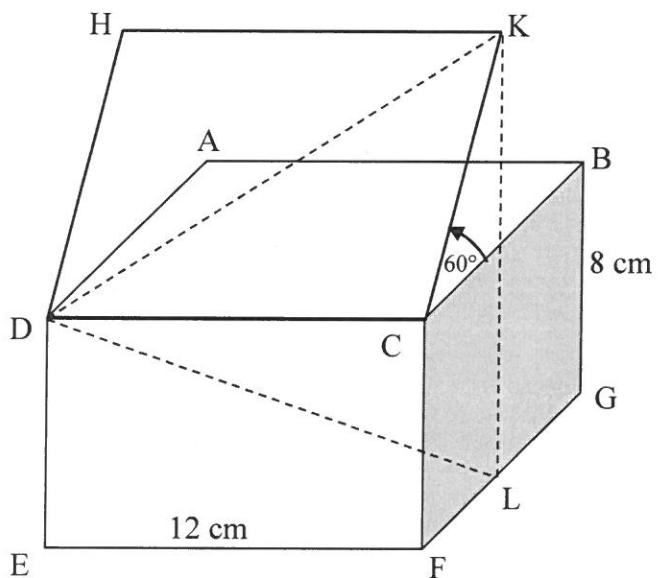
	<b>Solution/<i>Oplossing</i></b>	<b>Marks/ <i>Punte</i></b>
5.1.1		(2)
5.1.2		(3)
5.2		(6)

	<b>Solution/<i>Oplossing</i></b>	<b>Marks/ Punte</b>
5.3.1		(1)
5.3.2		(5)
5.4		(5)

	<b>Solution/Oplossing</b>	<b>Marks/ Punte</b>
5.5.1		(3)
5.5.2		(2)
		<b>[27]</b>

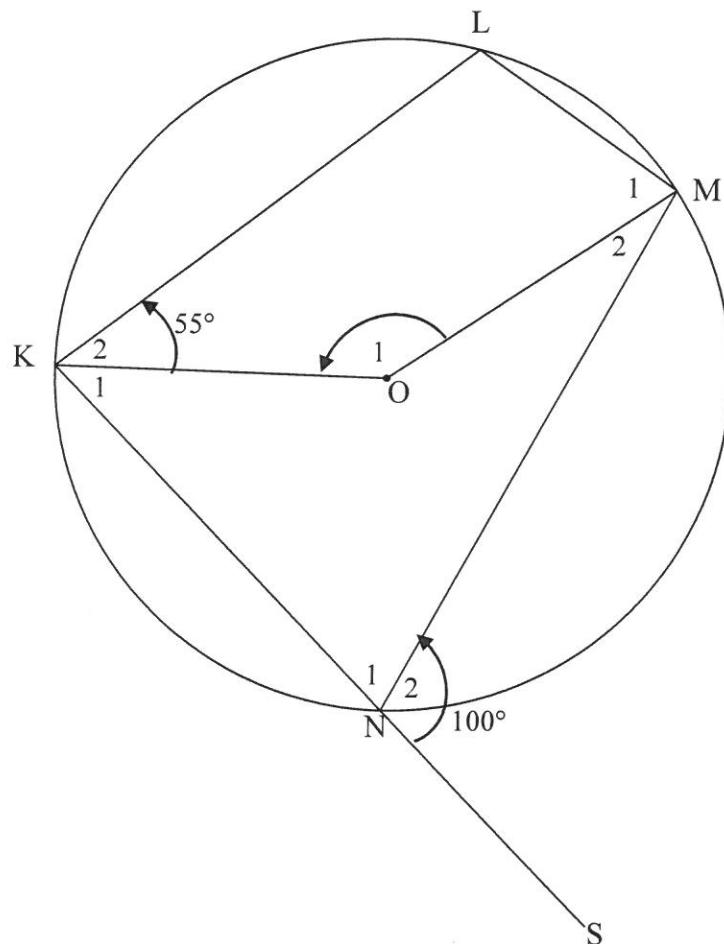
**QUESTION/VRAAG 6**

	<b>Solution/Oplossing</b>	<b>Marks/Punte</b>
6.1		(1)
6.2		(1)
6.3		(4)
		<b>[6]</b>

**QUESTION/VRAAG 7****FIGURE (I)/FIGUUR (I)****FIGURE (II)/FIGUUR (II)**

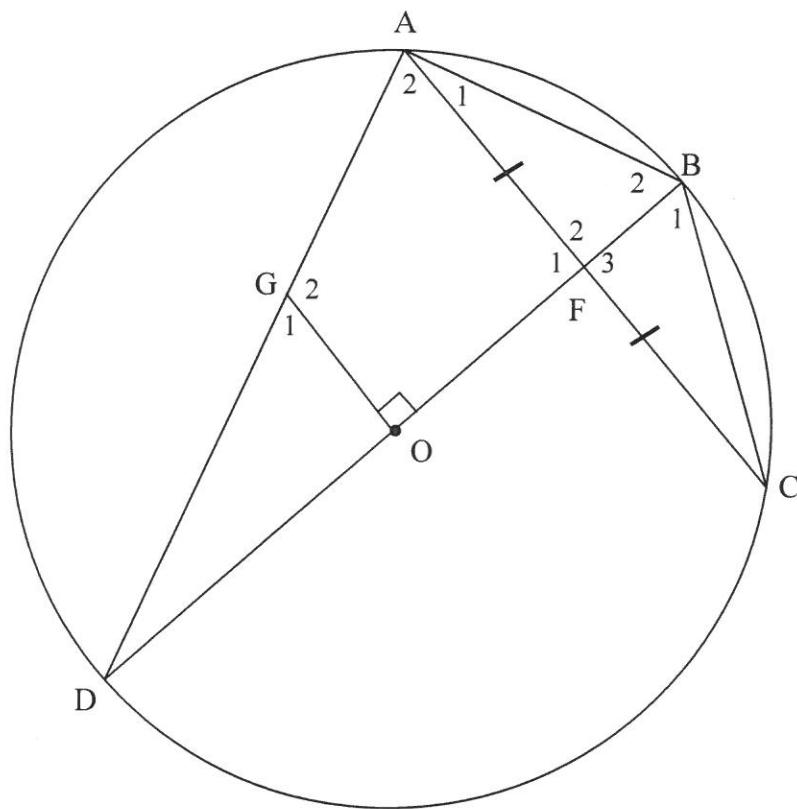
	<b>Solution/Oplossing</b>	<b>Marks/ Punte</b>
7.1		(1)

	<b>Solution/<i>Oplossing</i></b>	<b>Marks/ Punte</b>
7.2		(3)
7.3		(4) <b>[8]</b>

**QUESTION/VRAAG 8**

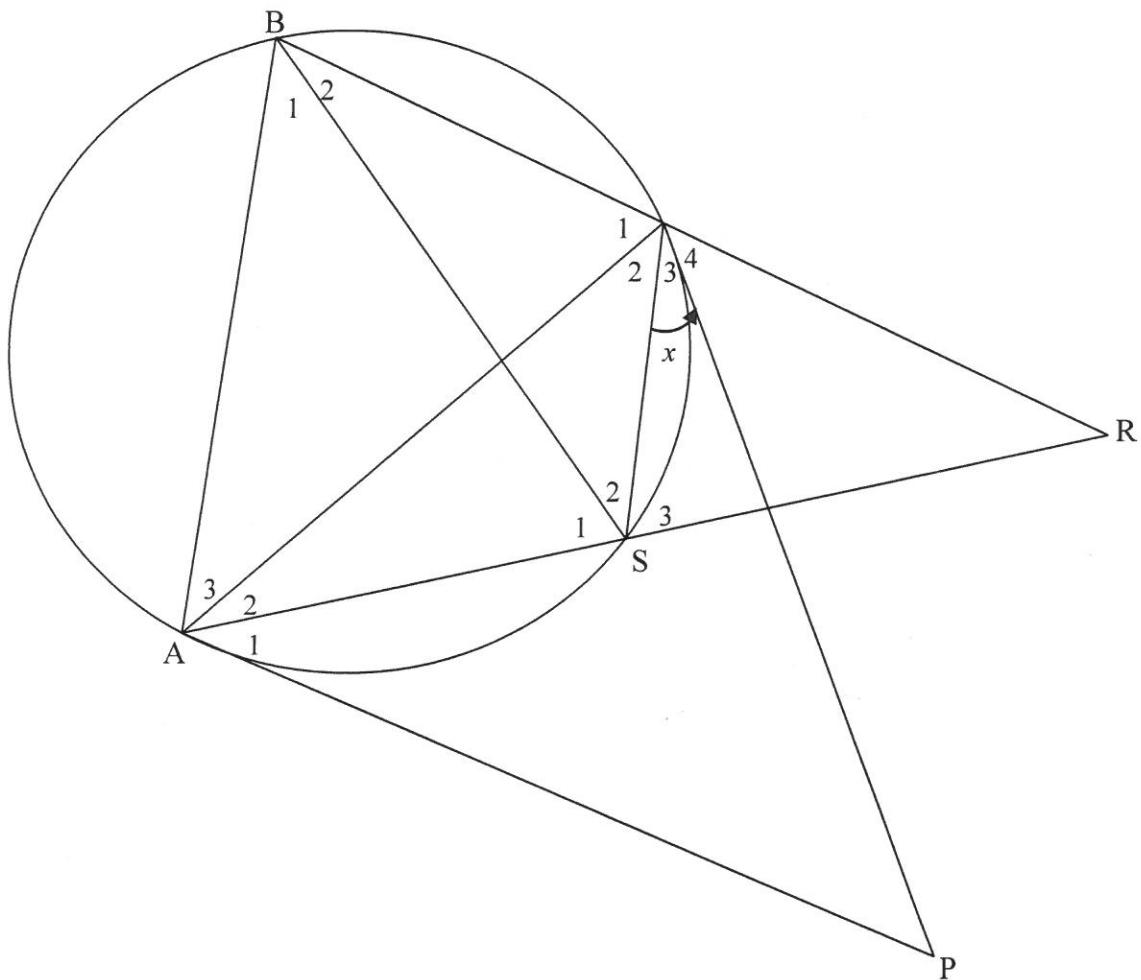
	<b>Solution/Oplossing</b>	<b>Marks/Punte</b>
8.1		(2)

	<b>Solution/Oplossing</b>	<b>Marks/ Punte</b>
8.2		(3)
8.3		(2)
		[7]

**QUESTION/VRAAG 9**

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

	<b>Solution/<i>Oplossing</i></b>	<b>Marks/ Punte</b>
9.2.1		
9.2.2		(3)
9.3		(4)
		(3)
		[12]

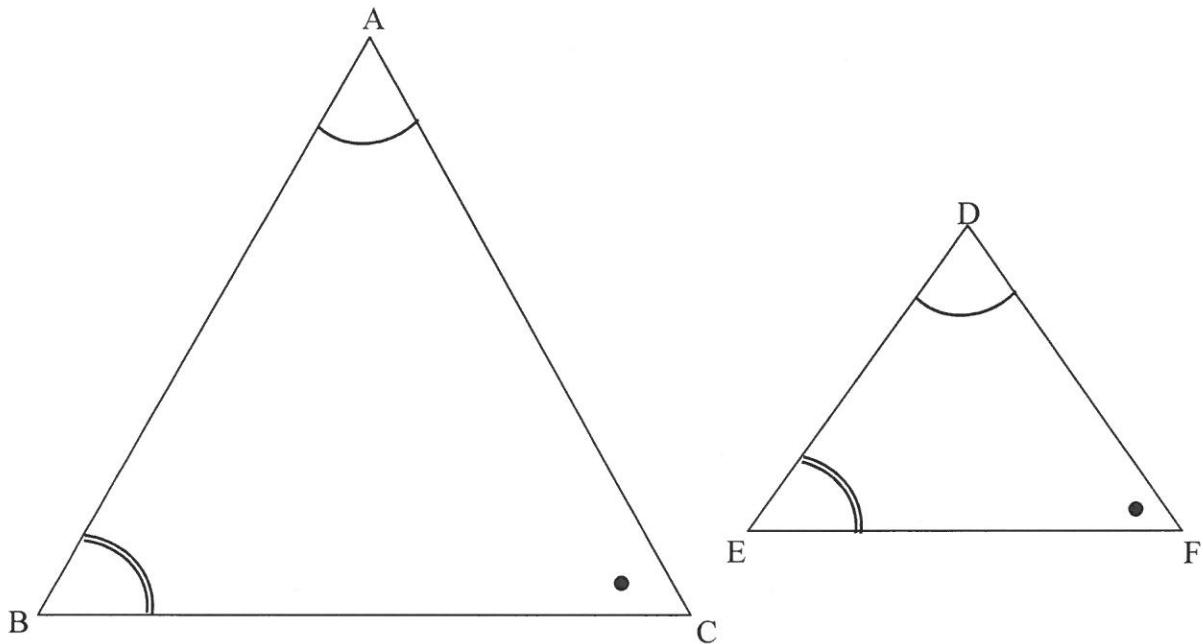
**QUESTION/VRAAG 10**

	<b>Solution/Oplossing</b>	<b>Marks/ Punte</b>
10.1		(1)

	<b>Solution/<i>Oplossing</i></b>	<b>Marks/ Punte</b>
10.2.1		(5)
10.2.2		(5)
10.2.3		(2) [13]

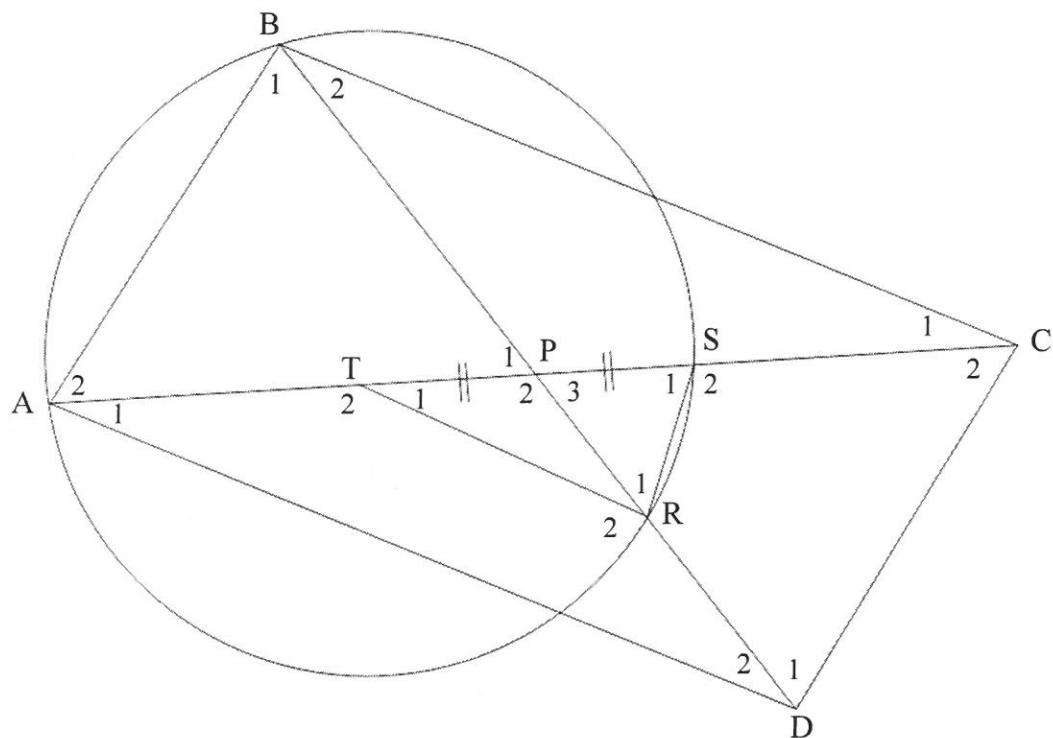
**QUESTION/VRAAG 11**

11.1



	<b>Solution/<i>Oplossing</i></b>	<b>Marks/ <i>Punte</i></b>
11.1		(6)

11.2



	Solution/ <i>Oplossing</i>	Marks/ <i>Punte</i>
11.2.1(a)		(2)
11.2.1(b)		(5)

	<b>Solution/<i>Oplossing</i></b>	<b>Marks/ Punte</b>
11.2.2(a)		(3)
11.2.2(b)		(2) [18]

	Additional space/ <i>Bykomende ruimte</i>	Marks/ <i>Punte</i>

	Additional space/ <i>Bykomende ruimte</i>	Marks/ <i>Punte</i>

	<b>Additional space/<i>Bykomende ruimte</i></b>	<b>Marks/ Punte</b>

**TOTAL/TOTAAL:**    150