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*NAAM VAN LEERDER:*

CLASS:  
*KLAS:*

**NATIONAL SENIOR CERTIFICATE**  
***NASIONALE SENIOR SERTIFIKAAT***

**MATHEMATICS P2/*WISKUNDE V2***

**GRADE/*GRAAD* 11**

**NOVEMBER 2015**

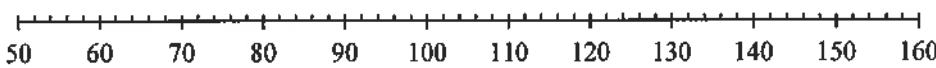
**SPECIAL ANSWER BOOK**  
***SPESIALE ANTWOORDEBOEK***

| <b>QUESTION<br/><i>VRAAG</i></b>         | <b>MARK<br/><i>PUNT</i></b> |  |  | <b>INITIAL<br/><i>PARAAF</i></b> | <b>MODERATION<br/><i>MODERERING</i></b> |  |  | <b>INITIAL<br/><i>PARAAF</i></b> |
|------------------------------------------|-----------------------------|--|--|----------------------------------|-----------------------------------------|--|--|----------------------------------|
| 1                                        |                             |  |  |                                  |                                         |  |  |                                  |
| 2                                        |                             |  |  |                                  |                                         |  |  |                                  |
| 3                                        |                             |  |  |                                  |                                         |  |  |                                  |
| 4                                        |                             |  |  |                                  |                                         |  |  |                                  |
| 5                                        |                             |  |  |                                  |                                         |  |  |                                  |
| 6                                        |                             |  |  |                                  |                                         |  |  |                                  |
| 7                                        |                             |  |  |                                  |                                         |  |  |                                  |
| 8                                        |                             |  |  |                                  |                                         |  |  |                                  |
| 9                                        |                             |  |  |                                  |                                         |  |  |                                  |
| 10                                       |                             |  |  |                                  |                                         |  |  |                                  |
| 11                                       |                             |  |  |                                  |                                         |  |  |                                  |
| <b>TOTAL<br/><i>TOTAAL</i><br/>(150)</b> |                             |  |  |                                  |                                         |  |  |                                  |

**This answer book consists of 24 pages.**  
***Hierdie antwoordeboek bestaan uit 24 bladsye.***

**QUESTION/VRAAG 1**

|     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 56  | 68  | 69  | 71  | 71  | 72  | 82  | 84  | 85  |
| 88  | 89  | 90  | 92  | 93  | 94  | 96  | 97  | 99  |
| 102 | 103 | 127 | 128 | 134 | 135 | 137 | 144 | 156 |

|     | <b>Solution/Oplissing</b>                                                            | <b>Marks<br/>Punte</b> |
|-----|--------------------------------------------------------------------------------------|------------------------|
| 1.1 | <hr/> <hr/> <hr/>                                                                    | (2)                    |
| 1.2 | <hr/> <hr/>                                                                          | (1)                    |
| 1.3 | <hr/> <hr/>                                                                          | (1)                    |
| 1.4 | <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>                                                  | (3)                    |
| 1.5 |  | (2)                    |

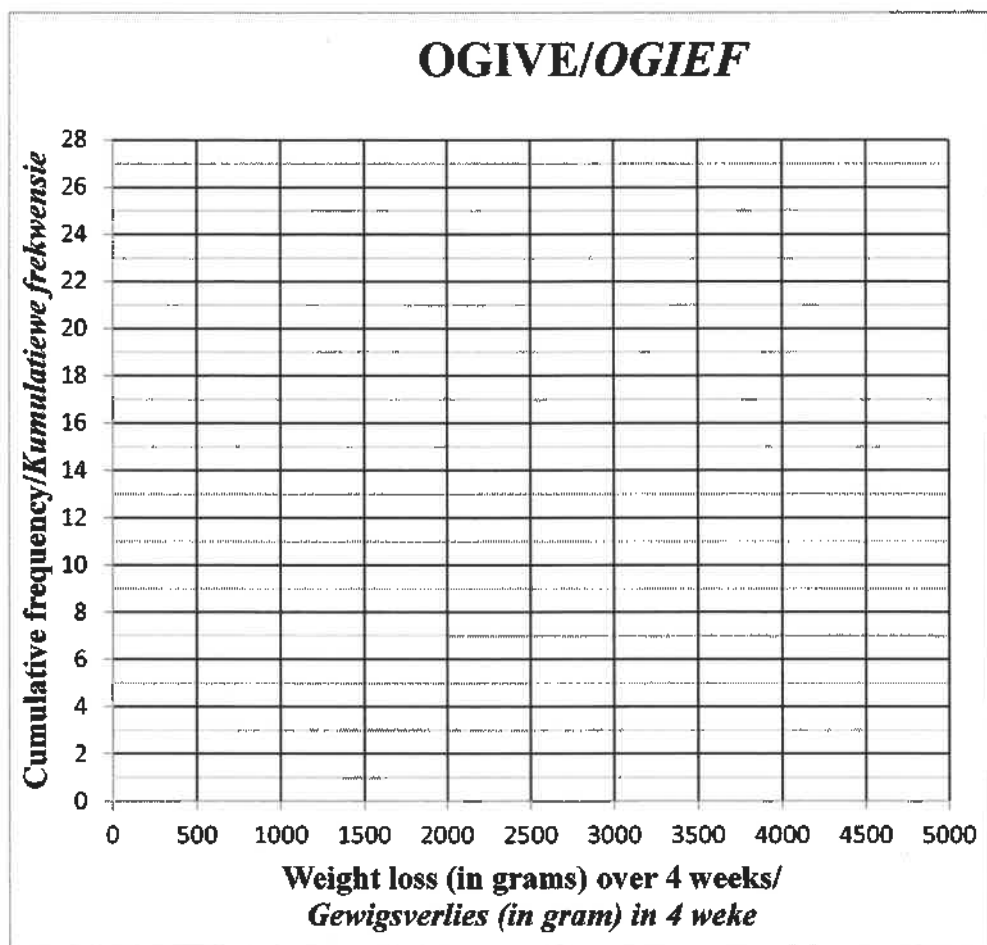
|     |  |             |
|-----|--|-------------|
| 1.6 |  | (2)         |
|     |  |             |
| 1.7 |  | (3)         |
|     |  |             |
|     |  |             |
|     |  |             |
|     |  |             |
|     |  |             |
|     |  |             |
|     |  |             |
|     |  | <b>[14]</b> |

**QUESTION/VRAAG 2**

| <b>WEIGHT LOSS OVER<br/>4 WEEKS (IN GRAMS)/<br/>GEWIGSVERLIES IN 4 WEKE<br/>(IN GRAM)</b> | <b>FREQUENCY/<br/>FREKWENSIE</b> |
|-------------------------------------------------------------------------------------------|----------------------------------|
| $1\ 000 < x \leq 1\ 500$                                                                  | 2                                |
| $1\ 500 < x \leq 2\ 000$                                                                  | 3                                |
| $2\ 000 < x \leq 2\ 500$                                                                  | 3                                |
| $2\ 500 < x \leq 3\ 000$                                                                  | 4                                |
| $3\ 000 < x \leq 3\ 500$                                                                  | 5                                |
| $3\ 500 < x \leq 4\ 000$                                                                  | 7                                |
| $4\ 000 < x \leq 4\ 500$                                                                  | 2                                |
| $4\ 500 < x \leq 5\ 000$                                                                  | 1                                |

|     | <b>Solution/Oplissing</b> | <b>Marks<br/>Punte</b> |
|-----|---------------------------|------------------------|
| 2.1 |                           | (2)                    |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |

2.2

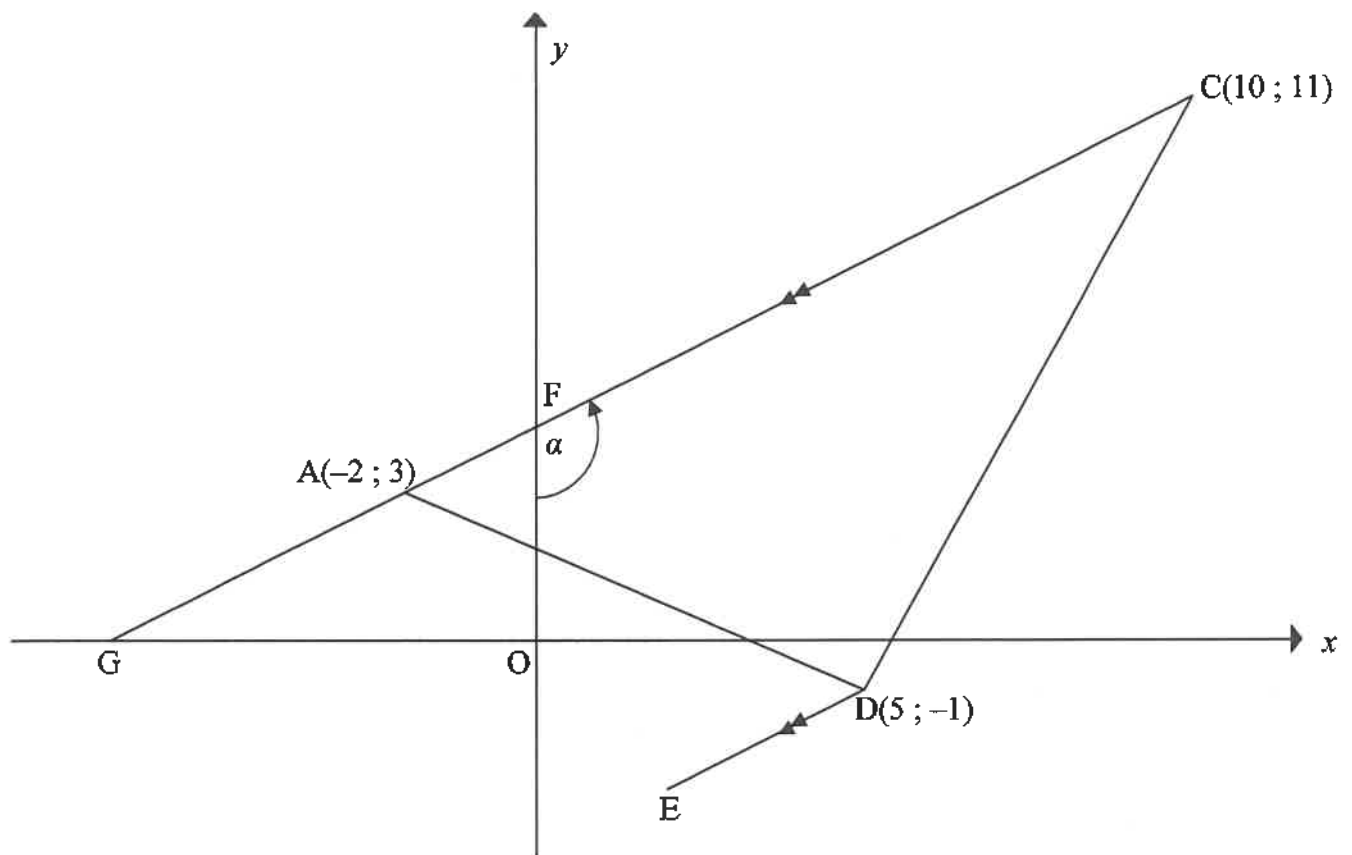


(4)

2.3

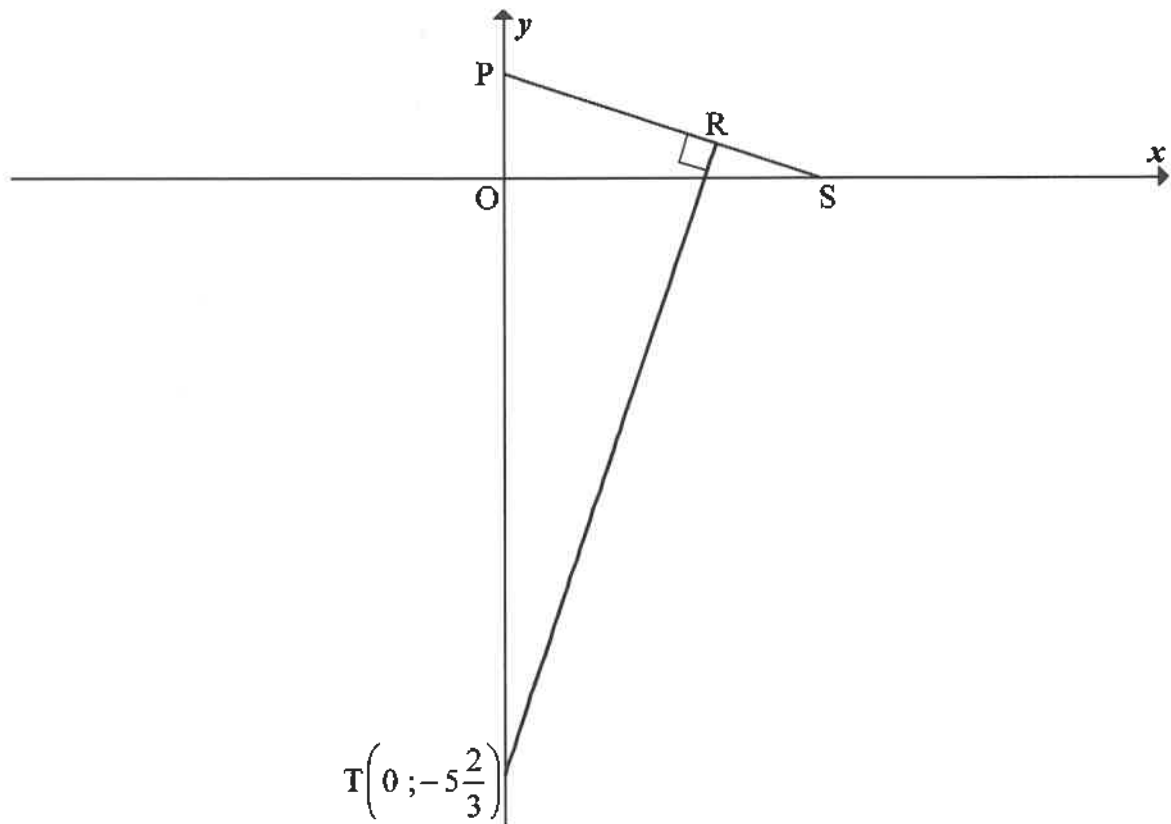
(2)

[8]

**QUESTION/VRAAG 3**

|     | <b>Solution/Oplissing</b> | <b>Marks<br/>Punte</b> |
|-----|---------------------------|------------------------|
| 3.1 |                           | (2)                    |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |
| 3.2 |                           | (3)                    |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |

|       | <b>Solution/Oplissing</b> | <b>Marks<br/>Punte</b> |
|-------|---------------------------|------------------------|
| 3.3   |                           |                        |
|       |                           |                        |
|       |                           |                        |
|       |                           |                        |
|       |                           |                        |
|       |                           |                        |
|       |                           |                        |
|       |                           | (3)                    |
| 3.4.1 |                           |                        |
|       |                           |                        |
|       |                           |                        |
|       |                           |                        |
|       |                           |                        |
|       |                           |                        |
|       |                           |                        |
|       |                           | (3)                    |
| 3.4.2 |                           |                        |
|       |                           |                        |
|       |                           |                        |
|       |                           |                        |
|       |                           |                        |
|       |                           |                        |
|       |                           |                        |
|       |                           |                        |
|       |                           | (3)                    |
|       |                           | <b>[14]</b>            |

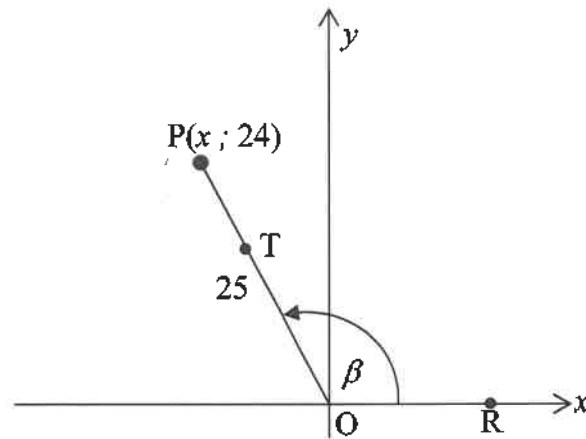
**QUESTION/VRAAG 4**

|     | <b>Solution/Oplissing</b> | <b>Marks<br/>Punte</b> |
|-----|---------------------------|------------------------|
| 4.1 |                           | (2)                    |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |
| 4.2 |                           | (2)                    |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |

|     | <b>Solution/Oplissing</b> | <b>Marks<br/>Punte</b> |
|-----|---------------------------|------------------------|
| 4.3 |                           | (3)                    |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |
| 4.4 |                           | (4)                    |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |
| 4.5 |                           | (3)                    |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |
| 4.6 |                           | (2)                    |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |
|     |                           | <b>[16]</b>            |

**QUESTION/VRAAG 5**

5.1

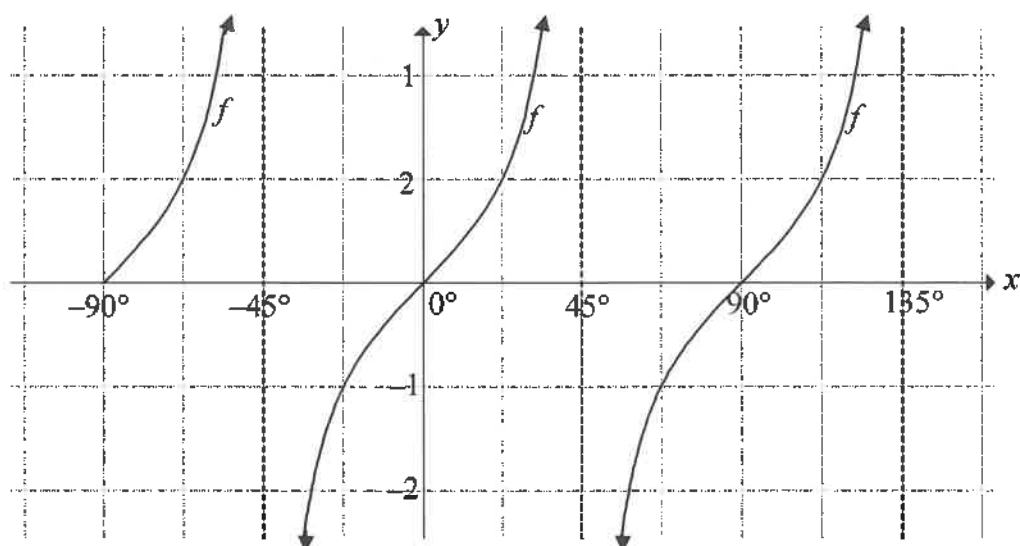


|          | <b>Solution/Oplossing</b> | <b>Marks<br/>Punte</b> |
|----------|---------------------------|------------------------|
| 5.1.1    |                           | (2)                    |
|          |                           |                        |
|          |                           |                        |
|          |                           |                        |
|          |                           |                        |
| 5.1.2(a) |                           | (1)                    |
|          |                           |                        |
| 5.1.2(b) |                           | (2)                    |
|          |                           |                        |
|          |                           |                        |
|          |                           |                        |
|          |                           |                        |
| 5.1.2(c) |                           | (2)                    |
|          |                           |                        |
|          |                           |                        |
|          |                           |                        |
|          |                           |                        |

|       | <b>Solution/Oplissing</b>                                                                       | <b>Marks<br/>Punte</b> |
|-------|-------------------------------------------------------------------------------------------------|------------------------|
| 5.1.3 | <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>                                     | (4)                    |
| 5.2   | <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> | (4)                    |
| 5.3.1 | <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>                                     | (3)                    |

|       | <b>Solution/Oplossing</b> | <b>Marks<br/>Punte</b> |
|-------|---------------------------|------------------------|
| 5.3.2 |                           |                        |
|       |                           | (6)<br>[24]            |

[illegible]

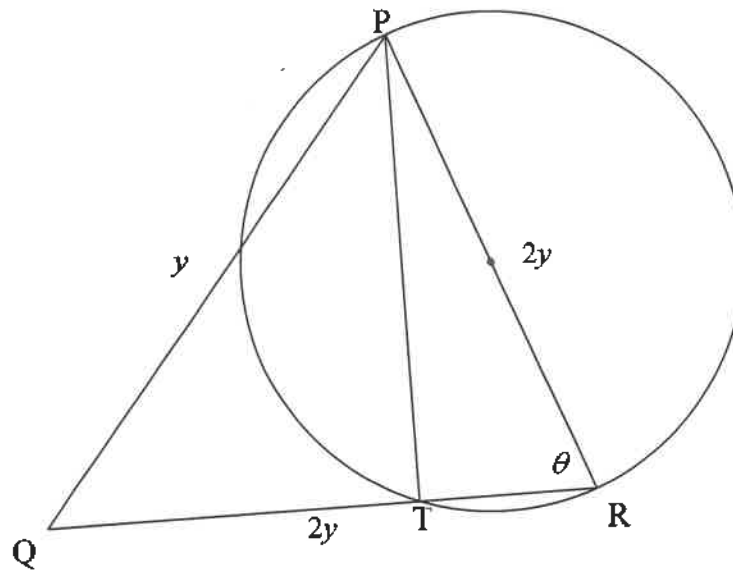
**QUESTION/VRAAG 6**

|       | <b>Solution/Oplissing</b> | <b>Marks<br/>Punte</b> |
|-------|---------------------------|------------------------|
| 6.1.1 |                           | (1)                    |
|       |                           |                        |
|       |                           |                        |
| 6.1.2 |                           | (2)                    |
|       |                           |                        |
|       |                           |                        |
| 6.1.3 |                           | (2)                    |
|       |                           |                        |
|       |                           |                        |

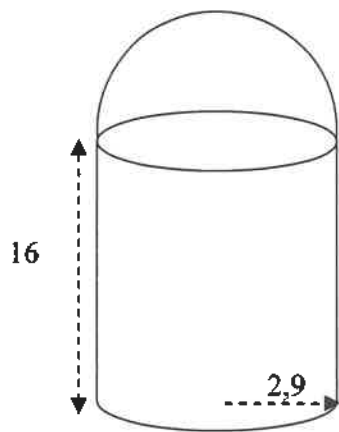
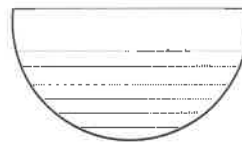


|       | <b>Solution/Oplossing</b> | <b>Marks<br/>Punte</b> |
|-------|---------------------------|------------------------|
| 6.2.4 |                           | (2)                    |
|       |                           |                        |
|       |                           |                        |
|       |                           |                        |
| 6.2.5 |                           | (2)                    |
|       |                           |                        |
|       |                           |                        |
|       |                           |                        |
|       |                           |                        |
|       |                           |                        |
|       |                           |                        |
|       |                           | <b>[21]</b>            |

|  | <b>Additional space/Bykomende ruimte</b> | <b>Marks<br/>Punte</b> |
|--|------------------------------------------|------------------------|
|  |                                          |                        |
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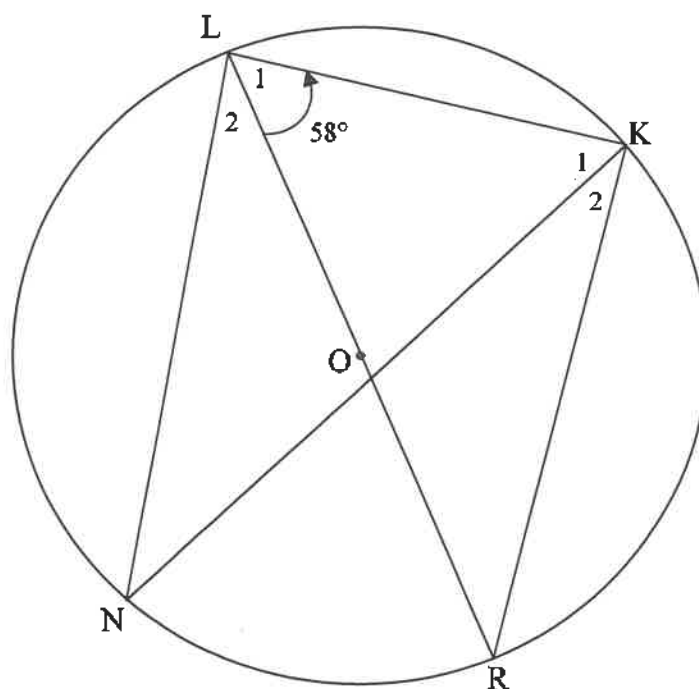
**QUESTION/VRAAG 7**

|     | <b>Solution/Oplissing</b> | <b>Marks<br/>Punte</b> |
|-----|---------------------------|------------------------|
| 7.1 |                           | (4)                    |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |
| 7.2 |                           | (3)                    |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |
|     |                           |                        |
|     |                           | <b>[7]</b>             |

**QUESTION/VRAAG 8****FIGURE 1****FIGURE 2**

|     | <b>Solution/Oplissing</b>                                   | <b>Marks<br/>Punte</b> |
|-----|-------------------------------------------------------------|------------------------|
| 8.1 | <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> | (5)                    |
| 8.2 | <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> | (3)                    |
|     |                                                             | <b>[8]</b>             |

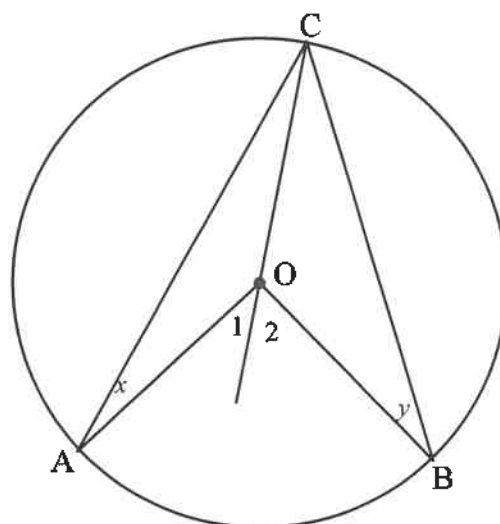
Give reasons for your statements and calculations in QUESTIONS 9, 10 and 11.  
Gee redes vir jou bewerings en berekeninge in VRAAG 9, 10 en 11.

**QUESTION/VRAAG 9**

|     | <b>Solution/Oplossing</b> | <b>Marks<br/>Punte</b> |
|-----|---------------------------|------------------------|
| 9.1 |                           |                        |
|     |                           |                        |
|     |                           |                        |
|     |                           | (2)                    |
| 9.2 |                           |                        |
|     |                           |                        |
|     |                           |                        |
|     |                           | (2)                    |
| 9.3 |                           |                        |
|     |                           |                        |
|     |                           |                        |
|     |                           | (2)                    |
|     |                           | [6]                    |

**QUESTION/VRAAG 10**

10.1



|        | <b>Solution/Oplossing</b> | <b>Marks<br/>Punte</b> |
|--------|---------------------------|------------------------|
| 10.1.1 |                           | (3)                    |
|        |                           |                        |
|        |                           |                        |
|        |                           |                        |
|        |                           |                        |
| 10.1.2 |                           | (3)                    |
|        |                           |                        |
|        |                           |                        |
|        |                           |                        |
|        |                           |                        |



|  | <b>Additional space/Bykomende ruimte</b> | <b>Marks<br/>Punte</b> |
|--|------------------------------------------|------------------------|
|  |                                          |                        |



|      |  |     |
|------|--|-----|
| 11.3 |  | (2) |
| 11.4 |  | (4) |
| 11.5 |  | (3) |
| [17] |  |     |

[illegible]

**TOTAL/TOTAAL: 150**