



Province of the  
**EASTERN CAPE**  
EDUCATION

|                            |  |
|----------------------------|--|
| <b>LEERDER NAAM EN VAN</b> |  |
|----------------------------|--|

|              |  |
|--------------|--|
| <b>GRAAD</b> |  |
|--------------|--|

**NASIONALE SENIOR SERTIFIKAAT**

**WISKUNDE V2**

**GRAAD 12**

**VOORBEREIDENDE EKSAMEN 2015**

|                               |
|-------------------------------|
| <b>SPESIALE ANTWOORDEBOEK</b> |
|-------------------------------|

| VRAAG  | PUNT | PARAFEER | MOD. |
|--------|------|----------|------|
| 1      |      |          |      |
| 2      |      |          |      |
| 3      |      |          |      |
| 4      |      |          |      |
| 5      |      |          |      |
| 6      |      |          |      |
| 7      |      |          |      |
| 8      |      |          |      |
| 9      |      |          |      |
| 10     |      |          |      |
| 11     |      |          |      |
| TOTAAL |      |          |      |

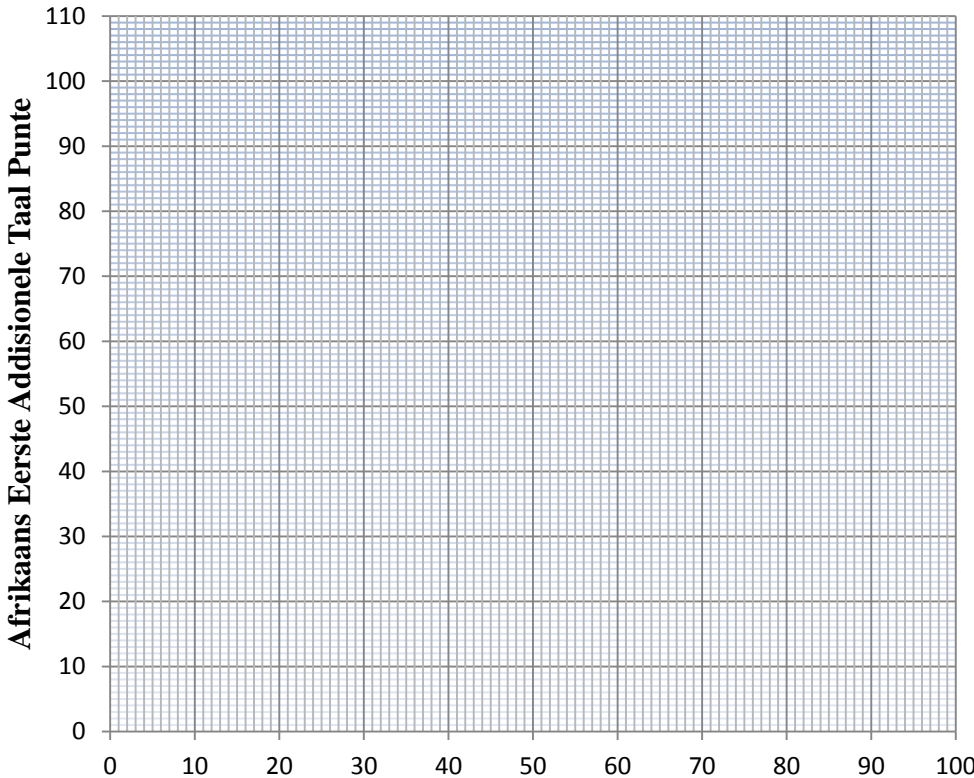
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Hierdie antwoordeboek bestaan uit 17 bladsye.

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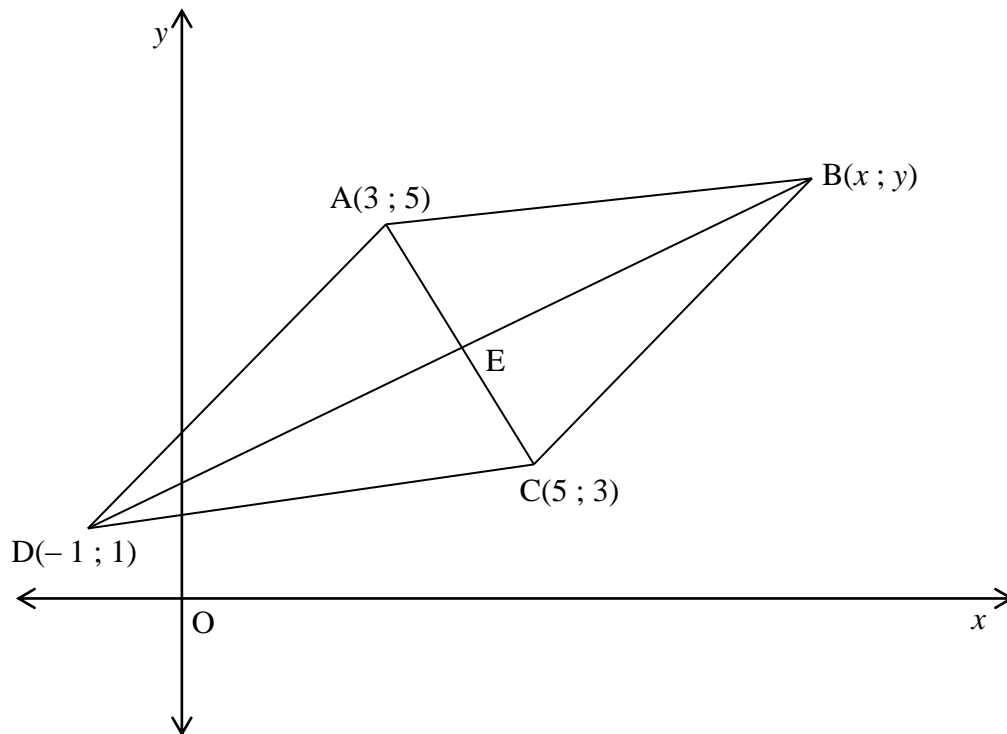
## VRAAG 1

|  | Oplossing   |    |    |    |    |    |    |    |    |    | Punte     |    |    |    |    |    |    |    |    |    |    |               |    |    |    |    |    |    |    |    |    |    |  |
|--|---|----|----|----|----|----|----|----|----|----|-----------|----|----|----|----|----|----|----|----|----|----|---------------|----|----|----|----|----|----|----|----|----|----|--|
| 1.1  | <table><tr><td>Engels HT</td><td>42</td><td>54</td><td>85</td><td>32</td><td>63</td><td>71</td><td>92</td><td>62</td><td>58</td><td>66</td></tr><tr><td>Afrikaans EAT</td><td>50</td><td>58</td><td>80</td><td>45</td><td>60</td><td>65</td><td>98</td><td>75</td><td>71</td><td>58</td></tr></table> |    |    |    |    |    |    |    |    |    | Engels HT | 42 | 54 | 85 | 32 | 63 | 71 | 92 | 62 | 58 | 66 | Afrikaans EAT | 50 | 58 | 80 | 45 | 60 | 65 | 98 | 75 | 71 | 58 |  |
|  | Engels HT   | 42 | 54 | 85 | 32 | 63 | 71 | 92 | 62 | 58 | 66        |    |    |    |    |    |    |    |    |    |    |               |    |    |    |    |    |    |    |    |    |    |  |
|  | Afrikaans EAT   | 50 | 58 | 80 | 45 | 60 | 65 | 98 | 75 | 71 | 58        |    |    |    |    |    |    |    |    |    |    |               |    |    |    |    |    |    |    |    |    |    |  |
| <div><p>Spreidiagram vir Engels HT en Afrikaans EAT Punte</p></div> |   |    |    |    |    |    |    |    |    |    |           |    |    |    |    |    |    |    |    |    |    |               |    |    |    |    |    |    |    |    |    |    |  |
|  |   |    |    |    |    |    |    |    |    |    |           |    |    |    |    |    |    |    |    |    |    |               |    |    |    |    |    |    |    |    |    |    |  |
|  |   |    |    |    |    |    |    |    |    |    | (4)       |    |    |    |    |    |    |    |    |    |    |               |    |    |    |    |    |    |    |    |    |    |  |
| 1.2  |   |    |    |    |    |    |    |    |    |    |           |    |    |    |    |    |    |    |    |    |    |               |    |    |    |    |    |    |    |    |    |    |  |
|  |   |    |    |    |    |    |    |    |    |    |           |    |    |    |    |    |    |    |    |    |    |               |    |    |    |    |    |    |    |    |    |    |  |
|  |   |    |    |    |    |    |    |    |    |    |           |    |    |    |    |    |    |    |    |    |    |               |    |    |    |    |    |    |    |    |    |    |  |
|  |   |    |    |    |    |    |    |    |    |    | (3)       |    |    |    |    |    |    |    |    |    |    |               |    |    |    |    |    |    |    |    |    |    |  |
| 1.3  |   |    |    |    |    |    |    |    |    |    |           |    |    |    |    |    |    |    |    |    |    |               |    |    |    |    |    |    |    |    |    |    |  |
|  |   |    |    |    |    |    |    |    |    |    |           |    |    |    |    |    |    |    |    |    |    |               |    |    |    |    |    |    |    |    |    |    |  |
|  |   |    |    |    |    |    |    |    |    |    |           |    |    |    |    |    |    |    |    |    |    |               |    |    |    |    |    |    |    |    |    |    |  |
|  |   |    |    |    |    |    |    |    |    |    | (2)       |    |    |    |    |    |    |    |    |    |    |               |    |    |    |    |    |    |    |    |    |    |  |
| 1.4  |   |    |    |    |    |    |    |    |    |    |           |    |    |    |    |    |    |    |    |    |    |               |    |    |    |    |    |    |    |    |    |    |  |
|  |   |    |    |    |    |    |    |    |    |    |           |    |    |    |    |    |    |    |    |    |    |               |    |    |    |    |    |    |    |    |    |    |  |
|  |   |    |    |    |    |    |    |    |    |    |           |    |    |    |    |    |    |    |    |    |    |               |    |    |    |    |    |    |    |    |    |    |  |
|  |   |    |    |    |    |    |    |    |    |    | (1)       |    |    |    |    |    |    |    |    |    |    |               |    |    |    |    |    |    |    |    |    |    |  |
| 1.5  |   |    |    |    |    |    |    |    |    |    |           |    |    |    |    |    |    |    |    |    |    |               |    |    |    |    |    |    |    |    |    |    |  |
|  |   |    |    |    |    |    |    |    |    |    |           |    |    |    |    |    |    |    |    |    |    |               |    |    |    |    |    |    |    |    |    |    |  |
|  |   |    |    |    |    |    |    |    |    |    |           |    |    |    |    |    |    |    |    |    |    |               |    |    |    |    |    |    |    |    |    |    |  |
|  |   |    |    |    |    |    |    |    |    |    | (2)       |    |    |    |    |    |    |    |    |    |    |               |    |    |    |    |    |    |    |    |    |    |  |
|  |   |    |    |    |    |    |    |    |    |    | [12]      |    |    |    |    |    |    |    |    |    |    |               |    |    |    |    |    |    |    |    |    |    |  |

**VRAAG 2**

|     | Oplossing |  | Punte |
|-----|-----------|--|-------|
| 2.1 |           |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  | (3)   |
|     | 2.2.1     |  |       |
|     |           |  |       |
|     |           |  | (1)   |
|     | 2.2.2     |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  | (2)   |
|     | 2.2.3     |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  | (2)   |
| 2.3 |           |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  | (2)   |
|     |           |  | [10]  |

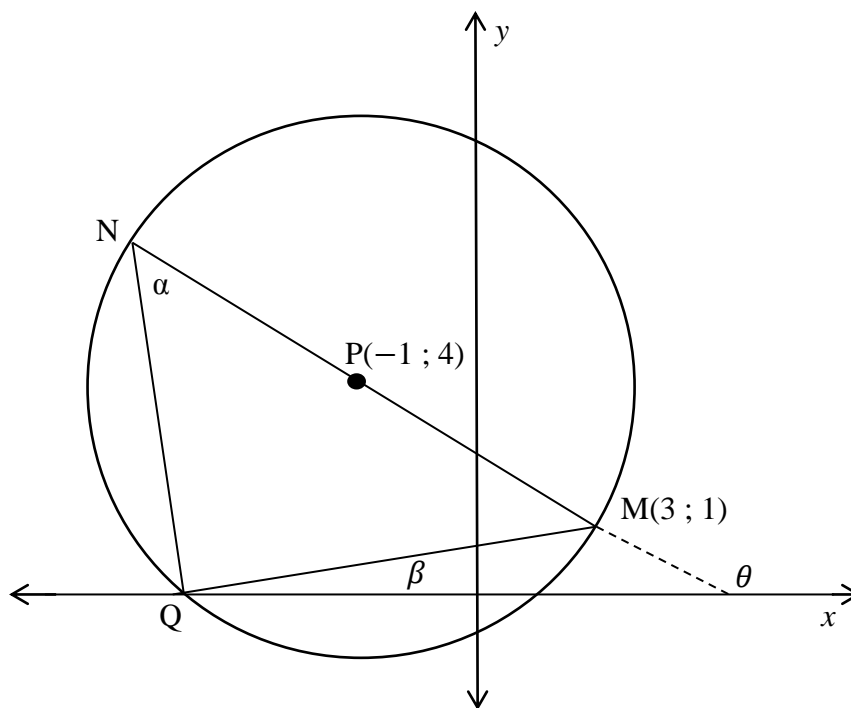
## VRAAG 3



|     | Oplossing |  | Punte |
|-----|-----------|--|-------|
| 3.1 | 3.1.1     |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  | (2)   |
|     | 3.1.2     |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  | (3)   |
|     | 3.1.3     |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  |       |
|     |           |  | (5)   |

|     |  |      |
|-----|--|------|
| 3.2 |  |      |
|     |  |      |
|     |  |      |
|     |  |      |
|     |  |      |
|     |  |      |
|     |  |      |
|     |  |      |
|     |  |      |
|     |  | (4)  |
| 3.3 |  |      |
|     |  |      |
|     |  |      |
|     |  |      |
|     |  |      |
|     |  |      |
|     |  |      |
|     |  |      |
|     |  |      |
|     |  | (5)  |
|     |  | [19] |

## VRAAG 4



|     | Oplossing | Punte |
|-----|-----------|-------|
| 4.1 |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           | (4)   |
| 4.2 |           |       |
|     |           |       |
|     |           |       |
|     |           | (1)   |
| 4.3 |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           | (3)   |
| 4.4 |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           | (2)   |

|     |  |      |
|-----|--|------|
| 4.5 |  |      |
|     |  |      |
|     |  |      |
|     |  |      |
|     |  |      |
|     |  |      |
|     |  |      |
|     |  |      |
|     |  |      |
|     |  |      |
|     |  | (5)  |
| 4.6 |  |      |
|     |  |      |
|     |  |      |
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|     |  |      |
|     |  |      |
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|     |  |      |
|     |  | (5)  |
|     |  | [20] |

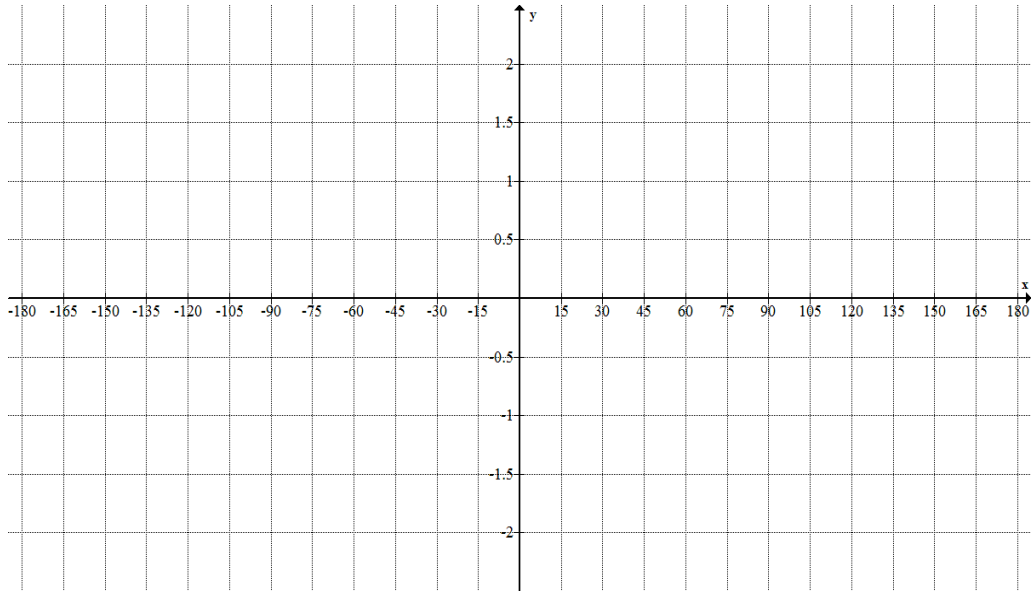
**VRAAG 5**

|     | <b>Oplossing</b> | <b>Punte</b> |
|-----|------------------|--------------|
| 5.1 |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  | (4)          |
| 5.2 |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  | (7)          |
| 5.3 |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  |              |
|     |                  | (3)          |



|     |  |      |
|-----|--|------|
| 5.4 |  |      |
|     |  |      |
|     |  |      |
|     |  |      |
|     |  |      |
|     |  |      |
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|     |  |      |
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|     |  |      |
|     |  |      |
|     |  | (6)  |
|     |  | [20] |

## VRAAG 6

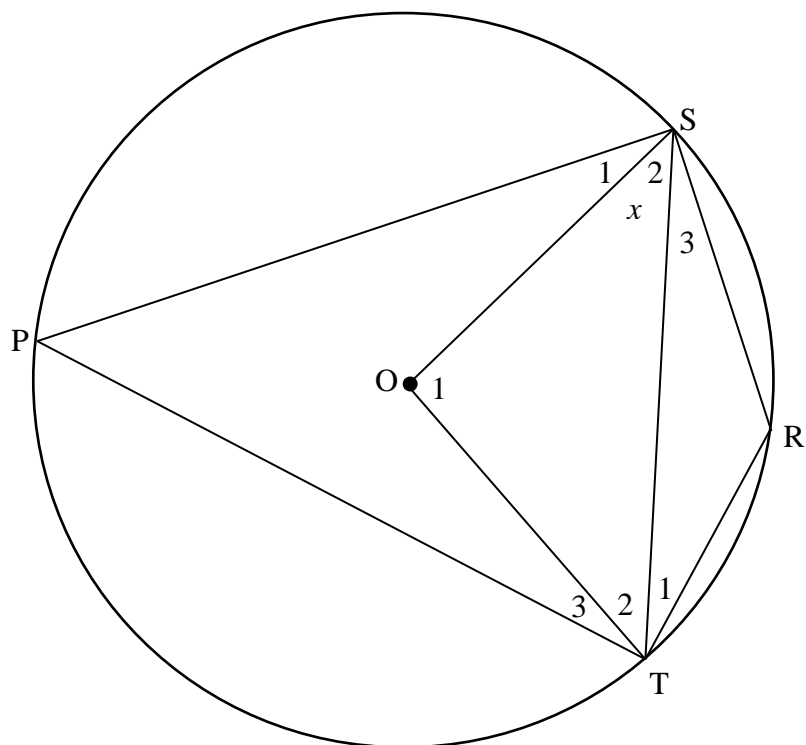
|     | Oplossing   |  | Punte |
|-----|---|--|-------|
| 6.1 |   |  |       |
|     |   |  |       |
|     |   |  | (1)   |
| 6.2 |  |  |       |
|     |   |  |       |
|     |   |  | (6)   |
| 6.3 | 6.3.1   |  |       |
|     |   |  |       |
|     |   |  |       |
|     |   |  | (2)   |
|     | 6.3.2   |  |       |
|     |   |  |       |
|     |   |  |       |
| 6.4 |   |  | (2)   |
|     |   |  |       |
|     |   |  |       |
|     |   |  |       |
|     |   |  | (2)   |
|     |   |  | [13]  |

## VRAAG 7

|     | Oplossing | Punte |
|-----|-----------|-------|
| 7.1 |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           | (3)   |

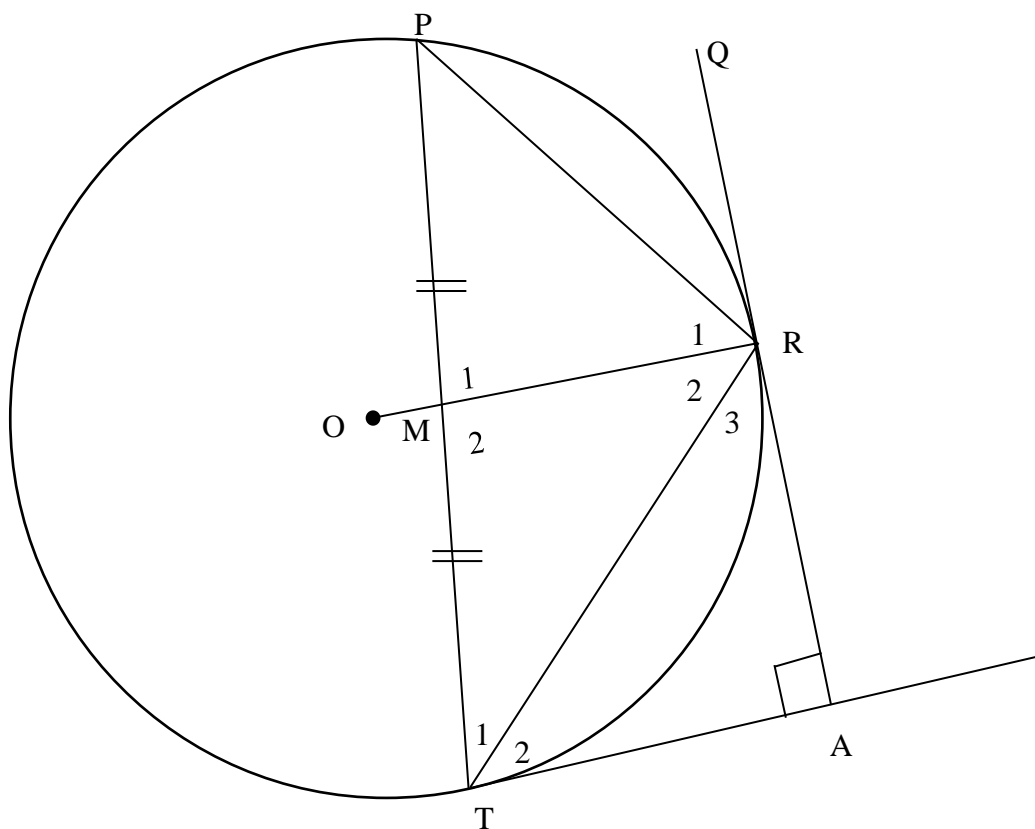
|     |  |     |
|-----|--|-----|
| 7.2 |  |     |
|     |  |     |
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|     |  |     |
|     |  |     |
|     |  |     |
|     |  |     |
|     |  | (3) |
| 7.3 |  |     |
|     |  |     |
|     |  |     |
|     |  |     |
|     |  |     |
|     |  |     |
|     |  |     |
|     |  |     |
|     |  |     |
|     |  | (3) |
|     |  | [9] |

## VRAAG 8



| Oplossing |       |  | Punte |
|-----------|-------|--|-------|
| 8.1       | 8.1.1 |  |       |
|           |       |  |       |
|           |       |  |       |
|           |       |  | (2)   |
|           | 8.1.2 |  |       |
|           |       |  |       |
|           |       |  |       |
|           |       |  |       |
|           |       |  |       |
|           |       |  |       |
|           |       |  |       |
|           |       |  | (2)   |
|           | 8.1.3 |  |       |
|           |       |  |       |
|           |       |  |       |
|           |       |  |       |
|           |       |  |       |
|           |       |  | (2)   |
| 8.2       |       |  |       |
|           |       |  |       |
|           |       |  |       |
|           |       |  |       |
|           |       |  |       |
|           |       |  |       |
|           |       |  |       |
|           |       |  | (3)   |
|           |       |  | [9]   |

## VRAAG 9



|     | Oplossing | Punte |
|-----|-----------|-------|
| 9.1 |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           | (4)   |
| 9.2 |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           | (5)   |
| 9.3 |           |       |
|     |           |       |
|     |           |       |
|     |           |       |
|     |           | (3)   |
|     |           | [12]  |

VRAAG 10

|        | Oplossing | Punte |
|--------|-----------|-------|
| 10.1   |           |       |
|        |           | (1)   |
| 10.2   |           |       |
| 10.2.1 |           |       |
|        |           |       |
|        |           |       |
|        |           |       |
|        |           |       |
|        |           | (3)   |
| 10.2.2 |           |       |
|        |           |       |
|        |           |       |
|        |           |       |
|        |           | (3)   |
| 10.2.3 |           |       |
|        |           |       |
|        |           |       |
|        |           |       |
|        |           |       |
|        |           |       |
|        |           |       |
|        |           |       |
|        |           | (4)   |
|        |           | [11]  |





|  |        |         |      |
|--|--------|---------|------|
|  | 11.2.2 |         |      |
|  |        |         |      |
|  |        |         |      |
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|  |        |         |      |
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|  |        |         |      |
|  |        |         |      |
|  |        |         |      |
|  |        |         |      |
|  |        |         |      |
|  |        |         | (4)  |
|  | 11.2.3 |         |      |
|  |        |         |      |
|  |        |         |      |
|  |        |         |      |
|  |        |         |      |
|  |        |         |      |
|  |        |         |      |
|  |        |         |      |
|  |        |         |      |
|  |        |         |      |
|  |        |         |      |
|  |        |         |      |
|  |        |         | (3)  |
|  |        |         | [15] |
|  |        |         |      |
|  |        | TOTAAL: | 150  |