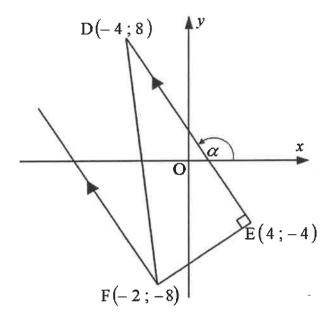


Candidate Barcode Label/Stafieskodeplakker

| | | | ver Boo oordebo | | | | | | | | | | | |
|--------------------------|----------------|---------|------------------------|----------------|------------|------------------------|-------------------|---------|------------------------|----|--------------------|--|------------------------|-------------------------------------|
| National Sen | nior Certific | cate/Na | sionale Se | enior Seri | tifikaat (| Grade 12/ | Graad . | 12) 202 | 3 | | | | | \bigcup |
| CENTRE NU | | | | | | | | | | | | | | |
| EXAMINATI EKSAMENNO | | R | | | | | | | | | | | Sequence n Volgnomm | o on mark sheet er op puntestaat |
| DATE DATUM | | | | | | | 1 | | BOOK N | | | OF VAN | | BOOKS BOEKE |
| SUBJECT CO | ODE | | | | | | | | PAPER <i>VRAEST</i> | | ABER NOMMER | 2 | | |
| SUBJECT NA VAKNAAM | AME | | TECI | INICA | AL MA | THEN | AATI | CS/T | EGN | ΊE | SE WISE | KUNDE | Z . | |
| M | ARKER/NAS | IENER | | MODER MODE | ATOR'S I | INITIALS I ARAAF IN | N RELE' BETROK | VANT B | LOCK/ K <i>KIE</i> | | | L-MARK/R LSIEN/HER | | |
| Question Vraag | Marks Punte | | ter's Code Initials | Marks Punte | SM | DCM | CM | IM | EM | | Question Vraag | Marks Punte | | Initials Paraaf |
| 1 | | | | | | | | | | | 1 | | | |
| 2 | | | | | | | | | | | 2 | | | |
| 3 | | | | | | | | | | | 3 | | | |
| 4 | | | | | | | | | | | 4 | | | |
| 5 | | | | | | | | | | | 5 | | | |
| 6 | | | | | | | | | | | 6 | | | |
| 7 | | | | | | | | | | | 7 | | | |
| 8 | | | | | | | | | | | 8 | | | |
| 9 | | | | | | | | | | | 9 | | | |
| 10 | | | | | | | | | | 1 | 10 | | | |
| 11 | | | | | | | | | | | 11 | | | |
| 12 | | | | | | | | | | 1 | 12 | | | |
| 13 | | | | | | | | | | 1 | 13 | | | |
| 14 | | | | | | | | | | 1 | 14 | | 1 | |
| 15 | | | | | | | | | | | 15 | | | |
| 16 | | | | | | | | | | | 16 | | | |
| | | | OTAL | | | | 4 | | 1 Г | 4 | TOTAL | 111 | T | |
| | | | OTAAL | | | | | | ┧┝ | _ | TOTAAL SH TOTAL | +++ | - | |
| | | | | | | | | | J L | | AFTOTAAL | | | |
| CONTROLLES SURNAME AN | | | RRECT | | | | | | | | | AD INSTRUCTION INSTRUCTION INSTRUCTION INSTRUCTION IN THE PROPERTY OF THE PROP | | |

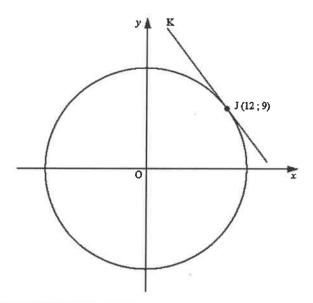
This answer book consists of 26 pages./Hierdie antwoordeboek bestaan uit 26 bladsye.

| Pl | LEASE FOLLOW THESE INSTRUCTIONS CAREFULLY | VOLG ASSEBLIEF HIERDIE INSTRUKSIES NOUKEURIG | | |
|----|--|--|--|--|
| 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. | 1. | Skryf jou eksamennommer en sentrumnommer duidelik in die ruimtes verskaf en plak jou eksamennommeretiket in die ruimte verskaf. | |
| 2. | Remember that your own name (or the name of your school) may not appear anywhere on or in this answer book. | 2. | Onthou dat jou eie naam (of die naam van jou skool) nie op of in hierdie antwoordeboek mag voorkom nie. | |
| 3. | Answer ALL questions in the spaces provided. | 3. | Beantwoord ALLE vrae in die ruimtes wat verskaf is. | |
| 4. | No pages may be torn from this answer book. | 4. | Geen bladsye mag uit hierdie antwoordeboek geskeur word nie. | |
| 5. | Read the instructions printed on your timetable carefully as well as any other instructions which may be given in each examination paper. | 5. | Lees die instruksies wat op jou eksamenrooster gedruk is sorgvuldig deur, asook enige ander instruksies wat in elke eksamenvraestel gegee word. | |
| 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. | 6. | Geen antwoordeboek mag deur die kandidaat behou of uit die eksamenlokaal verwyder word nie. Antwoordeboeke moet aan die einde van die eksamensessie aan die toesighouer terugbesorg word. | |
| 7. | Answers must be written in black/blue ink as distinctly as possible. Do NOT write in the margins. | 7. | Skryf die antwoorde so duidelik moontlik met swart/blou ink. MOENIE in die kantlyne skryf NIE. | |
| 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. | 8. | Dui die vrae wat jy beantwoord het op die voorblad van die antwoordeboek aan, waar die punte aangebring word, deur 'n kringetjie om die nommers van die vrae wat jy beantwoord het, te trek. | |
| 9. | Draw a neat line through any work/rough work that must not be marked. | 9. | Trek 'n netjiese lyn deur enige werk/rofwerk wat nie nagesien moet word nie. | |
| 10 | In the event that you use the additional space provided: 10.1 Write down the question number question 10.2 Leave a line and rule off after your answer. | 10 | In geval jy die bykomende ruimte wat verskaf is, gebruik: 10.1 Skryf die vraagnommer neer 10.2 Laat 'n lyn oop en trek 'n lyn na jou antwoord. | |

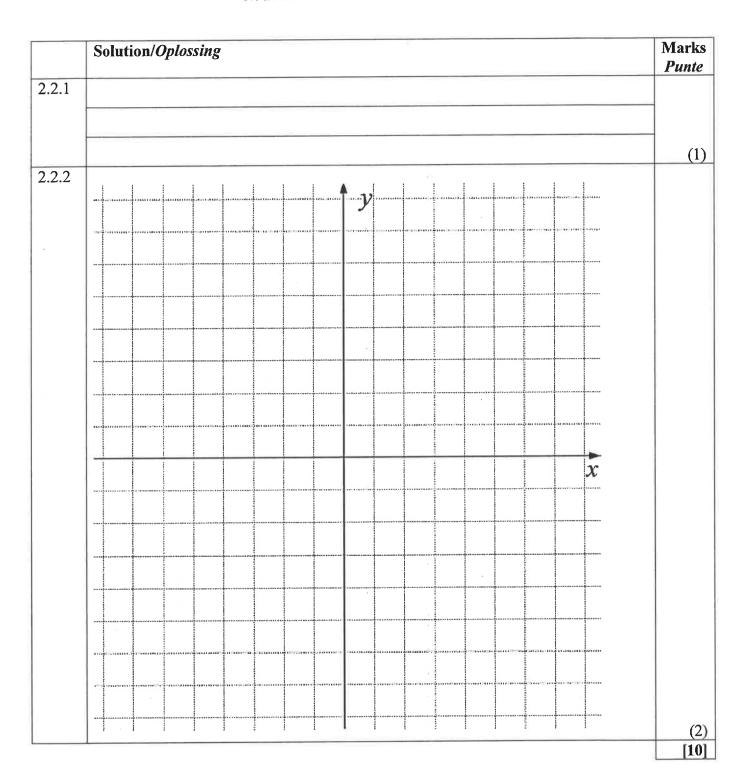


| | Solution/Oplossing | Marks <i>Punte</i> |
|-----|--------------------|--------------------|
| 1.1 | | |
| | | |
| | | |
| | | |
| | | |
| | | (2) |
| 1.2 | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | (3) |

| | | - |
|-----|-----|-------------|
| 1.3 | | |
| | | 1 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | - |
| | | - |
| | | |
| | | |
| | | |
| | | |
| | | |
| 1.4 | | (4) |
| 1.1 | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | · · | |
| | | |
| | · | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | (5) [14] |
| | | [14] |



| | Solution/Oplossing | Marks Punte |
|-------|--------------------|----------------|
| 2.1.1 | | 2 |
| | | |
| | | |
| | | |
| | | (2) |
| 2.1.2 | | (2) |
| | | |
| | | (1) |
| 2.1.3 | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | (4) |

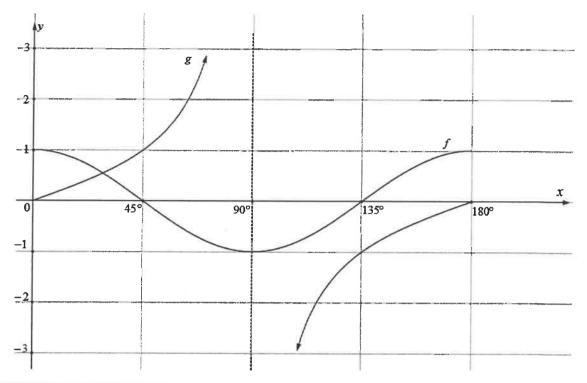


| | Solution/Oplossing | Marks Punte |
|-------|--------------------|----------------|
| 3.1.1 | | |
| | | |
| | | (2) |
| 3.1.2 | | |
| | | |
| | | |
| | | |
| 2.2.1 | | (2) |
| 3.2.1 | | |
| | | |
| | | |
| | | |
| | | (1) |
| 3.2.2 | | (1) |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | (5) |

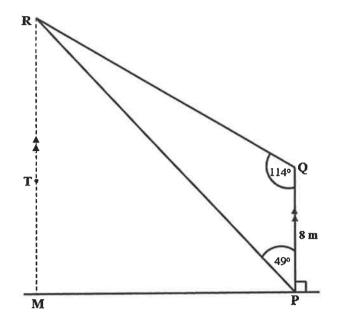
| 3.3 | |
|-----|------|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | (4) |
| | [14] |

| | Solution/Oplossing | Marks Punte |
|-------|--------------------|-------------|
| 4.1.1 | | |
| | | |
| 4.1.2 | | (1) |
| | | |
| | | (1) |
| 4.1.3 | | |
| | | |
| 4.2 | | (1) |
| 1.2 | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | (7) |

| | Solution/Oplossing | Marks Punte |
|-------|--------------------|----------------|
| 4.3.1 | | |
| | | |
| | | (1) |
| 4.3.2 | 6 | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | 1 |
| | | 1 |
| | | |
| | 0 | |
| | | 1 |
| | | 1 |
| | | 1 |
| | | 1 |
| | | 740 |
| | | (4) [15] |



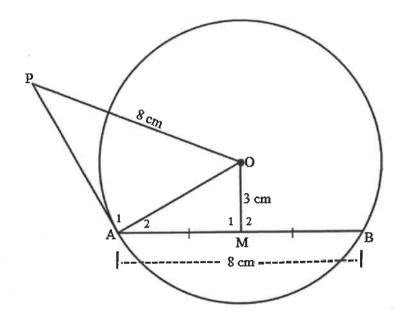
| | Solution/Oplossing | Marks Punte |
|--------------|--------------------|----------------|
| 5.1.1 | | Tunte |
| <i>5</i> 1 0 | | (1) |
| 5.1.2 | | |
| 5.1.3 | | (1) |
| | | (2) |
| 5.1.4 | | (2) |
| | | (1) |
| 5.1.5 | | |
| 5.2 | | (2) |
| 5.2 | | |
| | | |
| | | (2) |
| 5.3 | | (2) |
| | | (2) |
| | | [11] |



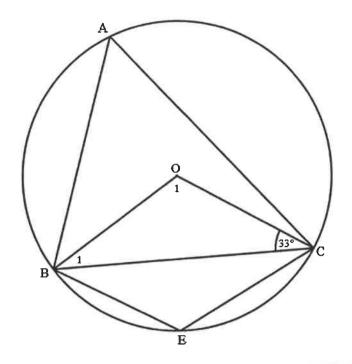
| | Solution/Oplossing | Marks Punte |
|-----|---|----------------|
| 6.1 | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | , | |
| | | |
| | | (4) |
| 6.2 | | (4) |
| | | |
| | | (1) |

| 6.3 | |
|-----|------------|
| | |
| | |
| | - (4) |
| | (1) |
| 6.4 | |
| | |
| | |
| | |
| | |
| | - |
| | _ |
| | |
| | |
| | |
| | |
| | - |
| | |
| | _ |
| | |
| | |
| | |
| | |
| | (3) [9] |

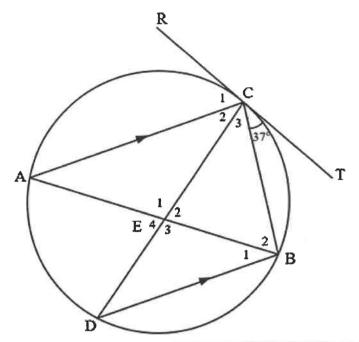
Give reasons for your statements in QUESTIONS 7, 8 and 9. Gee redes vir jou bewerings in VRAAG 7, 8 en 9.



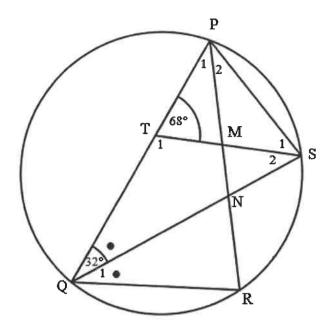
| | Solution/Oplossing | Marks <i>Punte</i> |
|-----|--------------------|--------------------|
| 7.1 | | |
| | | |
| | | (2) |
| 7.2 | | |
| | | |
| | | (1) |
| 7.3 | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | (3) |
| | 1 | [6] |



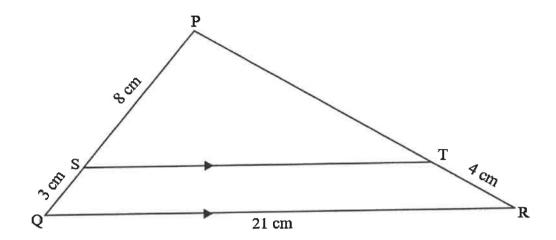
| | Solution/Oplossing | -Marks <i>Punte</i> |
|-------|--------------------|---------------------|
| 8.1.1 | | |
| | | |
| | | (2) |
| 8.1.2 | | (2) |
| | | |
| | | |
| | | (2) |
| 8.1.3 | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | (4) |



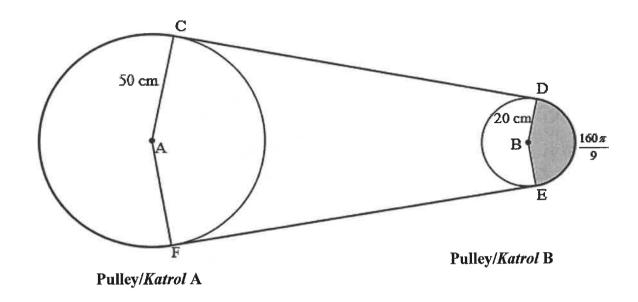
| | Solution/Oplossing | Marks Punte |
|-------|--------------------|-------------|
| 8.2.1 | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | (6) |
| 8.2.2 | | |
| | | |
| | | |
| | | (2) |
| 8.2.3 | | |
| | | |
| | | |
| | | |
| | | |
| | | (2) |



| | Solution/Oplossing | Marks Punte |
|--------------|--------------------|----------------|
| 8.3.1 (a) | | |
| | | (1) |
| 8.3.1 (b) | | |
| . , | | (2) |
| 8.3.2 | | (2) |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | (5) |
| | | [26] |



| Solution/Oplossing | Marks Punte |
|--------------------|----------------|
| | |
| | |
| | (1) |
| | |
| | |
| | |
| | (2) |
| | |
| | |
| | (2) |
| | |
| | |
| | |
| | |
| | (2) [7] |
| | |

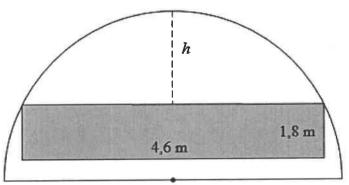


| | Solution/Oplossing | Marks Punte |
|--------|--------------------|----------------|
| 10.1.1 | | |
| | | |
| | | (1) |
| 10.1.2 | | |
| | | , |
| | | (1) |
| 10.1.3 | | |
| | | |
| | | |
| | | |
| • | | |
| | | (3) |

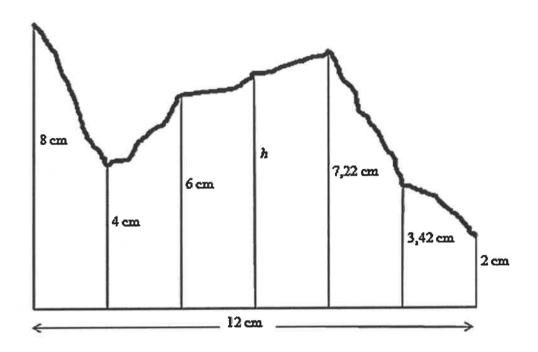
NSC/NSS – Answer Book/Antwoordeboek

| | Solution/Oplossing | Marks Punte |
|---------------|--------------------|----------------|
| 10.1.4 (a) | | |
| (u) | | |
| | | _ |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | (3) |
| 10.1.4 (b) | | |
| | | |
| | | - |
| | | - |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | (4) |

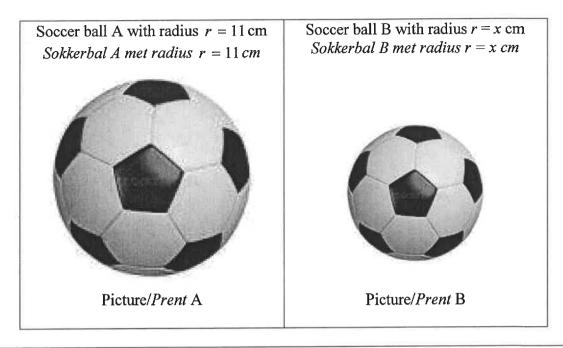
Marks Solution/Oplossing Punte 10.1.5 (3)



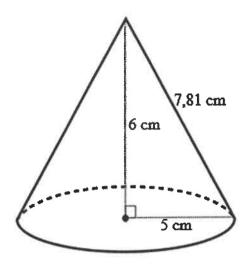
| 10.2.1 | | |
|--------|---|------|
| | | |
| | | |
| | | |
| | | (1) |
| 10.2.2 | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | (4) |
| | 1 | [20] |



| | Solution/Oplossing | Marks Punte |
|--------|--------------------|-------------|
| 11.1.1 | | |
| | | |
| | | (1) |
| 11.1.2 | | |
| | | |
| | | |
| | | (2) |
| 11.1.3 | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | (3) |



| Solution/Oplossing | Marks |
|--------------------|-------|
| | Punte |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | == |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| ·· | |
| | |
| | (5) |



| | Solution/Oplossing | Marks Punte |
|--------|--------------------|-------------|
| 11.3.1 | | |
| | | |
| | | |
| | | |
| | | |
| | | (2) |
| 11.3.2 | | |
| | | |
| | | 1) |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | (5) |
| | | [18] |

TOTAL/TOTAAL:

| Additional space/Bykomende ruimte | Marks Punte |
|-----------------------------------|----------------|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | _ |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

Marks Additional space/Bykomende ruimte Punte