

Candidate Barcode label/Stafieskodeplakker

SC/NSC Answer Book

*SS/NSS Antwoordeboek Seniorsertifikaat-Eksamenantwoordeboek*

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

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| **CENTRE NUMBER**  ***SENTRUMNOMMER*** |  |  |  |  |  |  |  |

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| **EXAMINATION NUMBER**  ***EKSAMENNOMMER*** |  |  |  |  |  |  |  |  |  |  |  |  |  |

Sequence No. on mark sheet

Volgnommer op puntestaat

|  |  |  |  |  |  |  |  |
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| **DATE**  ***DATUM*** |  |  | **BOOK NUMBER**  ***BOEKNOMMER*** |  | **OF**  ***VAN*** |  | **BOOKS**  ***BOEKE*** |

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| **SUBJECT CODE**  ***VAKKODE*** |  |  |  |  |  |  | **PAPER NUMBER**  ***VRAESTELNOMMER*** | **2** |

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| **SUBJECT NAME**  ***VAKNAAM*** | **MATHEMATICS/*WISKUNDE*** |

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| **MARKER/NASIENER** | | | | | **MODERATOR'S INITIALS IN RELEVANT BLOCK**  ***MODERATOR SE VOORLETTERS IN RELEVANTE BLOKKIE*** | | | | | | | | | | | | | | | | | | | |
| **Question**  ***Vraag*** | **Marks**  ***Punte*** | | | **Marker's code and Initials**  ***Nasiener se kode en Voorletters*** | **Marks**  ***Punte*** | | | **SM** | **Marks**  ***Punte*** | | | **DCM**  ***AHN*** | **Marks**  ***Punte*** | | | **CM**  ***HN*** | **Marks**  ***Punte*** | | | **IM** | **Marks**  ***Punte*** | | | **EM** |
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| **CONTROLLED AND CERTIFIED CORRECT**  **(SURNAME AND INITIALS OF EA)**  ***GEKONTROLEER EN AS KORREK GESERTIFISEER (VAN EN VOORLETTERS VAN EA)*** |  | READ INSTRUCTIONS ON THE NEXT PAGE.  *LEES INSTRUKSIES OP VOLGENDE BLADSY*. |
| **This answer book consists of 25 pages./*Hierdie antwoordeboek bestaan uit 25 bladsye*.** | | |

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| **PLEASE FOLLOW THESE INSTRUCTIONS CAREFULLY** | | ***VOLG ASSEBLIEF HIERDIE INSTRUKSIES NOUKEURIG*** | | |
|  |  | |  |  |
| 1. | Clearly write your examination number and centre number in the space provided and attach your barcode label in the space provided. | | *1.* | *Skryf jou eksamennommer en sentrumnommer duidelik in die ruimtes verskaf en plak jou stafieskodeplakker 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 question paper. | | *5.* | *Lees die instruksies, wat op jou eksamenrooster gedruk is, sorgvuldig deur, asook enige ander instruksies wat op elke vraestel gegee word.* |
|  |  | |  |  |
| 6. | Candidates may NOT retain an answer book or remove it from the examination room. | | *6.* | *GEEN antwoordeboek mag deur die kandidaat behou of uit die eksamenlokaal verwyder word NIE.* |
|  |  | |  |  |
| 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. Laat die kantlyne oop.* |
|  |  | |  |  |
| 8. | Write the numbers of the questions you have answered on the front cover of the answer book where marks are to be recorded. | | *8.* | *Skryf die nommers van die vrae wat jy beantwoord het op die voorblad van die antwoordeboek waar die punte aangebring word.* |
|  |  | |  |  |
| 9. | If you require additional space for your answers:  9.1 Use the additional space provided at the end of the answer book.  9.2 When answering a question in the additional space, clearly indicate the question number in the column on the LHS.  9.3 Rule off after each answer. | | *9.* | *In geval jy bykomende ruimte benodig vir jou antwoorde:*  *9.1 Gebruik die bykomende ruimte wat aan die einde van die antwoordeboek verskaf word.*  *9.2 As 'n vraag in die bykomende ruimte beantwoord word, dui duidelik die vraagnommer in die kolom aan die LK aan.*  *9.3 Trek 'n lyn na elke antwoord.* |
|  |  | |  |  |
| 10. | Draw a neat line through any work/rough work that must not be marked. | | *10.* | *Trek 'n netjiese lyn deur enige werk/rofwerk wat nie nagesien moet word nie.* |
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| **QUESTION/*VRAAG* 1** |  |  |

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| **TIME TAKEN (*t*) (IN MINUTES)/**  ***TYD GENEEM (t) (IN MINUTE)*** | **NUMBER OF CHILDREN/**  ***GETAL***  ***KINDERS*** |
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|  | 10 |
|  | 9 |
|  | 7 |
|  | 8 |
|  | 7 |
|  | 2 |

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|  | **Solution/*Oplossing*** | **Marks *Punte*** |
| 1.1 |  | (1) |
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| 1.2 |  | (2) |
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| 1. 3 | |  |  |  | | --- | --- | --- | | **Time in minutes (*t*)**  ***Tyd in minute* (*t***) | **Number of children**  ***Getal kinders*** | **Cumulative frequency**  ***Kumulatiewe frekwensie*** | |  | 2 |  | |  | 10 |  | |  | 9 |  | |  | 7 |  | |  | 8 |  | |  | 7 |  | |  | 2 |  | | (2) |
| 1. 4 |  | (3) |
| 1.5 |  | (2) |
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| **QUESTION/*VRAAG* 2** |  |  |

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| **LEARNER/**  ***LEERDER*** | **L1** | **L2** | **L3** | **L4** | **L5** | **L6** | **L7** | **L8** | **L9** | **L10** | **L11** | **L12** | **L13** | **L14** | **L15** |
| **TEST 1/**  ***TOETS 1***  **(%)** | 10 | 18 | 23 | 24 | 27 | 34 | 34 | 36 | 37 | 39 | 40 | 44 | 45 | 48 | 49 |
| **TEST 2/**  ***TOETS 2***  **(%)** | 33 | 21 | 32 | 20 | 58 | 43 | 49 | 48 | 41 | 55 | 50 | 45 | 62 | 68 | 60 |

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|  | **Solution/*Oplossing*** | **Marks *Punte*** |
| 2.1 |  | (3) |
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| 2.2.1 |  | (1) |
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| 2.2.2 |  | (2) |
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| 2.3.1 |  | (2) |
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| 2.3.2 |  | (2) |
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| **QUESTION/*VRAAG* 3** |  |  |

***y***



K

0

D(–2 ; –5)

A

C(2 ; –3)



E(–2; 0)

***x***

B



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|  | **Solution/*Oplossing*** | **Marks *Punte*** |
| 3.1.1 |  | (2) |
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| 3.1.2 |  | (2) |
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|  | **Solution/*Oplossing*** | **Marks *Punte*** |
| 3.1.3 |  | (3) |
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| 3.1.4 |  | (3) |
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| 3.2 |  | (3) |
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| 3.3.1 |  | (1) |
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| 3.3.2 |  | (4) |
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|  |  | **[18]** |

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| **QUESTION/*VRAAG* 4** |  |  |

*y*

*x*

P

K

L

M(2 ; 1)

T(–2 ; *b*)





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|  | **Solution/*Oplossing*** | **Marks *Punte*** |
| 4.1 |  | (4) |
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| 4.2.1 |  | (2) |
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|  | **Solution/*Oplossing*** | **Marks *Punte*** |
| 4.2.2 |  | (4) |
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| 4.2.3 |  | (7) |
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| 4.3 |  | (4) |
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|  |  | **[21]** |

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| **QUESTION/*VRAAG* 5** |  |  |

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|  | **Solution/*Oplossing*** | **Marks *Punte*** |
| 5.1.1 |  | (1) |
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| 5.1.2 |  | (1) |
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| 5.2 |  | (5) |
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|  | **Solution/*Oplossing*** | **Marks *Punte*** |
| 5.3 |  | (5) |
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| **QUESTION/*VRAAG* 6** |  |  |

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|  | **Solution/*Oplossing*** | **Marks *Punte*** |
| 6.1 |  | (6) |
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6.2

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–180°

***x***

*f*

*g*

A

B

D

C

***y***



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|  | **Solution/*Oplossing*** | **Marks *Punte*** |
| 6.2.1(a) |  | (1) |
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|  |
| 6.2.1(b) |  | (2) |
|  |
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|  |
| 6.2.2(a) |  | (2) |
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| 6.2.2(b) |  | (2) |
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| 6.2.3 |  | (5) |
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| **QUESTION/*VRAAG* 7** |  |  |

2*θ*

A

60°

B

C

D

E

*x*

*x* + 2

F

G

H

*θ*



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|  | **Solution/*Oplossing*** | **Marks *Punte*** |
| 7.1.1 |  | (2) |
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| 7.1.2 |  | (2) |
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|  | **Solution/*Oplossing*** | **Marks *Punte*** |
| 7.2 |  | (3) |
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| 7.3 |  | (4) |
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|  |  | **[11]** |

**Give reasons for your statements in QUESTIONS 8, 9 and 10.**

***Gee redes vir jou bewerings in VRAAG 8, 9 en 10.***

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| **QUESTION/*VRAAG 8*** |  |  |

8.1

S

1

N



L

P

T

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2

31°

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|  | **Solution/*Oplossing*** | **Marks *Punte*** |
| 8.1.1(a) |  | (2) |
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| 8.1.1(b) |  | (2) |
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| 8.1.2 |  | (4) |
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8.2

B

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K

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|  | **Solution/*Oplossing*** | **Marks *Punte*** |
| 8.2.1 |  | (2) |
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| 8.2.2 |  | (3) |
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| **QUESTION/*VRAAG* 9** |  |  |

A

B

K

M

N

1

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*x*

1

2



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|  | **Solution/*Oplossing*** | **Marks *Punte*** |
| 9.1 |  | (6) |
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| 9.2 |  | (5) |
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| **QUESTION/*VRAAG* 10** |  |  |

10.1

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F

D

E



A

B

C

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|  | **Solution/*Oplossing*** | **Marks *Punte*** |
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10.2

C



A

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F

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4

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G

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D

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|  | **Solution/*Oplossing*** | **Marks *Punte*** |
| 10.2.1(a) |  | (3) |
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| 10.2.1(b) |  | (5) |
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| 10.2.2(a) |  | (3) |
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|  | **Solution/*Oplossing*** | **Marks *Punte*** |
| 10.2.2(b) |  | (5) |
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| 10.2.2(c) |  | (4) |
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| **TOTAL/*TOTAAL*:** |  | **150** |

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|  | **Additional space/*Bykomende ruimte*** | **Marks *Punte*** |
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| **RE-MARK/RE-CHECK**  ***HERMERK/HERSIEN*** | | | | |
| **Question**  ***Vraag*** | **Marks**  ***Punte*** | | | **Initials**  ***Voorletters*** |
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| **TOTAL**  ***TOTAAL*** |  |  |  |  |
| **HASH TOTAL**  ***KAF-***  ***TOTAAL*** |  |  |  |  |