

## GAUTENG DEPARTMENT VAN ONDERWYS

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| --- | --- | --- |
| **LEERDER NAAM EN VAN** | **:** |  |
| **VAK** | **:** | **WISKUNDE** |
| **GRAAD** | **:** | **9** |
| **TAAK** | **:** | **Kwartaal 3 Toets** |
| **PUNTE** | **:** | **50** |
| **TYD** | **:** | **1 Uur** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Vrae** | **1** | **2** | **3** | **4** | **5** | **6** | **Totaal** |
| **Topic** | MKV  (Verskillende onderwerpe) | Funksies en Verwantskappe | Grafieke | Transformasies | Meetkunde van reguit lyne | Meetkunde van 2-D vorms |  |
| **Totale Punt** | 5 | 7 | 11 | 5 | 12 | 10 | 50 |
| **Leerder Punt** |  |  |  |  |  |  |  |

**Instruksies aan Leerders**

1. Lees al die instruksies versigtig.

2. Vraag 1 bestaan uit 5 meervoudige keuse vrae. Sirkel die letter langs die korrekte antwoord.

3. Beantwoord vrae 2 tot 6 in die spasies daarvoor gelaat.

4. All working must be shown.

5. Give a reason for each of your statements in question 5 and 6.

6. Die toets is uit 50 punte.

7. Die toets is 1 uur lank.

8. ‘n Goedgekeurde wetenskaplike sakrekenaar (nie-programeerbaar of grafies) mag gebruik word.

**Vraag 1 [Meervoudige keuse vrae]**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1.1 | Wat is die verhouding tussen en in die tabel hier onder?   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  | |  |  |  |  |  |  | | |  |
|  |  |  |  |
|  | A. |  |  |
|  | B. |  |  |
|  | C. |  |  |
|  | D. |  |  |
|  |  |  | (1) |
|  |  |  |  |
| 1.2 | Wat is die y-afsnit van die grafiek | |  |
|  |  |  |  |
|  | A. |  |  |
|  | B. |  |  |
|  | C. | 5 |  |
|  | D. |  |  |
|  |  |  | (1) |
|  |  |  |  |
| 1.3 | Voltooi: ‘n ………………….is ‘n vierhoek waarvan die hoeklyne gelyk is aan mekaar. | |  |
|  |  |  |  |
|  | A. | vlieër |  |
|  | B. | ruit |  |
|  | C. | reghoek |  |
|  | D. | trapesium |  |
|  |  |  | (1) |
|  |  |  |  |
| 1.4 | Die som van aangrensende hoeke op ‘n reguit lyn is ………… | |  |
|  |  |  |  |
|  | A. | 90 |  |
|  | B. | 180 |  |
|  | C. | 270 |  |
|  | D. | 360 |  |
|  |  |  | (1) |
|  |  |  |  |
| 1.5 | Die koördinate van punt gereflekteer oor die is? | |  |
|  |  |  |  |
|  | A. |  |  |
|  | B. |  |  |
|  | C. |  |  |
|  | D. |  |  |
|  |  |  | (1) |
|  |  |  | **[5]** |

**Vraag 2**

|  |  |  |
| --- | --- | --- |
| 2.1 | Gebruik die vergelyking en inset waardes om die vloeidiagram te voltooi. |  |
|  | A picture containing antenna  Description automatically generated | (3) |
| 2.2 | Voltooi die volgende tabel deur die geordende pare hieronder te gebruik. |  |
|  | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  | |  |  |  |  |  |  | | (2) |
| 2.3 | Bepaal nou die waardes van en deur die inligting in vraag **2.2** te gebruik. |  |
|  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | (2) |
| **[7]** | | |

**Vraag 3**

|  |  |  |  |
| --- | --- | --- | --- |
| 3.1 | Gebruik die Kartesiese vlak om die volgende vrae te beantwoord. | |  |
|  | 3.1.1 | Gebruik enige metode om die grafiek van op die assestelsel te teken. | (3) |
|  | 3.1.2 | Plot en verbind die punte in die onderstaande table op dieselfde assestelsel as in vraag **3.1.1**.   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  | |  |  |  |  |  |  | | (2) |
|  | Chart, line chart  Description automatically generated | |  |
| 3.2 | Watter van die twee grafieke (**3.1.1 or 3.1.2**) wat geteken is, is lineêr?  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | (1) |
| 3.3 | Wat is die minimum waarde van die grafiek in **3.1.2?**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | (1) |
| 3.4 | Bepaal die vergelyking van die onderstaande reguitlyn grafiek. | |  |
|  | Chart, line chart  Description automatically generated | |  |
|  || | (4) |
| **[11]** | | | |

**Vraag 4**

|  |  |  |  |
| --- | --- | --- | --- |
| 4.1 | Identifiseer die volgende transformasie | |  |
|  | 4.1.1 | A picture containing shoji  Description automatically generated\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | (1) |
|  | 4.1.2 | Chart, surface chart  Description automatically generated  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | (1) |
| 4.2 | ‘n Driehoek word gereflekteer oor die lyn . Die tabel toon aan die hoekpunte se koördinate **voor** die refleksie. Wat is die koördinate van die refleksie beeld? Vul in die koördinate van elke gereflekteerde hoekpunte in op die tabel.   |  |  | | --- | --- | | **Oorspronklike Beeld Hoekpunt** | **Gereflekteerde Beeld Hoekpunt** | |  |  | |  |  | |  |  | | | (3) |
| **[5]** | | | |

**Vraag 5**

|  |  |  |  |
| --- | --- | --- | --- |
| 5.1 | Bestudeer die diagram en skryf neer die naam van die gemerkte hoek.    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | (1) |
| 5.2 | Sê of die lyne in die diagram parallele lyne is of nie en gee ‘n rede vir jou antwoord. | |  |
|  | 5.2.1.1 | A picture containing diagram  Description automatically generated  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | (2) |
|  | 5.2.2 | Chart, line chart  Description automatically generated  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | (2) |
|  | 5.2.3 | Chart, radar chart  Description automatically generated  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | (2) |
|  |  |  |  |
| 5.3 | Gegee: en EC halveer  Shape  Description automatically generated  Bewys dat .   |  |  | | --- | --- | | **Bewering** | **Rede** | |  |  | |  |  | |  |  | |  |  | | | (5) |
| **[12]** | | | |

**Question 6**

|  |  |  |  |
| --- | --- | --- | --- |
| 6.1 | Voltooi die volgende. | |  |
|  | 6.1.1 | Die som van die hoeke in ‘n vierhoek is …………………. | (1) |
|  | 6.1.2 | Die hoeklyne van ‘n …………………….en ‘n …………………. halveer mekaar met regte hoeke. | (2) |
| 6.2 | Bestudeer die diagram en voltooi die bewering.  Shape  Description automatically generated  As en dan is die bostaande vierhoek ‘n \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, want \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | (2) |
|  |  | |  |
| 6.3 | is ‘n Trapesium, en .  Shape  Description automatically generated | |  |
|  | 6.3.1 | Bereken met redes die grote van .   |  |  | | --- | --- | | **Bewering** | **Rede** | |  |  | |  |  | |  |  | |  |  | | (3) |
|  | 6.3.2 | Bereken met redes die grote van .   |  |  | | --- | --- | | **Bewering** | **Rede** | |  |  | |  |  | |  |  | | (2) |
| **[10]** | | | |