Naam van leerling/*Name of learner*:………………………………………………..

# November/*November*

**Graad/*Grade* 8 Punte/*Marks*: 100**

**Wiskunde Eerste Vraestel Tyd/*Time*: 2 uur/*hours***

***Mathematics First Paper***

**Eksaminator/*Examinator*: Moderator:**

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| INSTRUKSIES AAN KANDIDATE*INSTRUCTIONS TO CANDIDATES*  1. Hierdie vraestel bestaan uit TWEE vrae. Beantwoord ALTWEE die vrae   *This question paper consists of TWO questions. Answer BOTH questions*   1. Beantwoord Vraag 2.8.2 op Diagramblad. Skryf jou naam in die   spasie wat voorsien word en handig dit saam met jou antwoordstel in.  *Answer Question 2.8.2 on Diagram sheet. Write you name in the space*  *and submit with your answer sheets.*   1. Nommer presies soos op die vraestel   *Number the answers exactly as on the paper*   1. Begin elke vraag op ‘n nuwe bladsy en trek ‘n lyn na elke vraag .   Laat ‘n spasie oop na elke nommer.  *Start each question on a new page and draw a line at the end of each*  *question. Leave a space between each number.*  5. GEEN SAKREKENAAR mag gebruik word nie  *NO CALCULATOR may be used.*   1. Wys al jou bewerkings en dit is tot jou voordeel om netjies te werk   *Show all your calculations and it is in your own interest to work neatly.*   1. Sterkte!   *Good luck!* |

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| **VRAAG 1**  ***QUESTION 1*** | |  |  |
|  |  |  |  |
| 1.1 | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | |  |
|  | Uit die lys van getalle hierbo skryf neer ALLE getalle wat  *From the list of numbers above, write down ALL numbers that…* | |  |
|  |  |  |  |
|  | 1.1.1 | faktore van 6 is.  *are factors of 6.* |  |
|  | 1.1.2 | veelvoude van 3 is  *are multiples of 3.* |  |
|  | 1.1.3 | deelbaar deur 2 is.  *divisible by 2.* |  |
|  | 1.1.4 | priemgetalle is  *are prime numbers.* | (8) |
|  |  |  |  |
| 1.2 | Vul die ontbrekende getal in om die kante gelyk te maak hieronder  *Write the missing number to make the sides equal.* | |  |
|  |  | |  |
|  | 467 940 + (1 670 + 357 865) + 2 678 879 = (467 940 + 1 670) + \_\_\_\_\_\_ + 357 865 | | (1) |
| 1.3 | Bestudeer die vier getalle hieronder.  *Study the four numbers below.*   |  |  |  |  | | --- | --- | --- | --- | | **30** | **2** | **8** | **10** | | |  |
|  |  |  |  |
|  | Plaas die getalle in die spasies hieronder sodat die vergelyking korrek is.  *Organise these numbers so that each equation is correct.* | |  |
|  | \_\_\_ + \_\_\_ ÷ \_\_\_ ― \_\_\_ = 24 | |  |
|  | Gebruik elke getal slegs een keer. Skryf die hele vergelyking neer.  *Use each number only once per equation. Write down the whole equation.* | | (4) |
| 1.4 | Bereken die volgende en wys al jou bewerkings  *Calculate the following and show all calculations*  1.4.1 | | (5) |
|  | 1.4.2 ( 4 + 3)2 –  1.4.3 ( 0,2)2 + | | (4)  (3) |
| 1.5 | Skryf van groot na klein.  *Write from biggest to smallest.* | | (3) |
| 1.6 | Watter een is die kleinste? Wenk: Skryf eers getalle in gewone vorm.  *Which is the smallest? Tip: Write numbers in normal notation first*  of | | (3) |
|  |  | |  |
| 1.7 | Bepaal deur priemfaktore te gebruik (leermetode of faktorboom of enige ander metode).  *Determine by using prime factors (ladder method or factor tree or any other method).* | | (4) |
|  |  |  |  |
| 1.8 | Skryf die volgende verhouding in sy eenvoudigste vorm deur die nodige berekeninge te doen:  *Write the following ratio in its simplest form by doing the necessary calculations:*  0,5 m : 250 cm | | (2) |
|  |  |  |  |
| 1.9 | Vermeerder R45 in die verhouding 9 : 5  *Increase R45 in the ratio 9 : 5* | | (3) |
| 1.10 | Verdeel R450 in die verhouding 4 : 5  *Divide R450 in the ratio 4 : 5* | | (4) |
| 1.11 | ‘n Meubileerder koop ‘n stoel teen ‘n kosprys van R250 by ‘n groot handelaar en verkoop dit dan teen R325.  *A furnisher buys a chair at a cost price of R250 at a wholesaler and sells it at R325.* | |  |
|  |  | |  |
|  | 1.11.1 | Bereken sy wins in rand.  *Calculate his profit in rand.* | (1) |
|  |  |  |  |
|  | 1.11.2 | Bereken die wins as ‘n persentasie van die kosprys.  *Calculate the profit as a percentage of the cost price.* | (3) |
|  |  |  |  |  |
| 1.12 | Die nommers 1 tot 15 word in ‘n hoed geplaas. Wat is die waarskynlikheid om ‘n priemgetal te trek?  *The numbers 1 to 15 are placed in a hat. What is the probability to draw a prime number* | | (2) |
|  |  | | [50] |

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| **VRAAG 2**  ***QUESTION 2*** | | |  | |  | |
| 2.1 | | Bestudeer die volgende uitdrukking en beantwoord die vrae wat volg:  *Consider the following expression and answer the questions that follow.*  – 2 – 3y2 + 32y3 – 4 | | |  | |
|  | | 2.1.1 | Hoeveel terme is daar in die uitdrukking voor vereenvoudiging?  *How many terms does the expression have before simplifying?* | | (1) | |
|  | | 2.1.2 | Gee die graad van die uitdrukking.  *Give the degree of the expression* | | (1) | |
|  | | 2.1.3 | Skryf die konstante in die uitdrukking neer  *Write down the constant in the expression* | | (1) | |
|  | | 2.1.4 | Skryf die koëffisient van *xy* neer  *Write down the coefficient of xy* | | (1) | |
|  | | 2.1.5 | Wat is die eksponent van *x* in die eerste term?  *What is the exponent of x in the first term?* | | (1) | |
|  | | 2.1.6 | Bepaal die waarde van die uitdrukking indien en *y* = 2  *Determine the value of the expression if and y = 2* | | (4) | |
|  | |  |  | |  | |
| 2.2 | | Vereenvoudig:  *Simplify:* | | |  | |
|  | | 2.2.1 |  | | (2) | |
|  | |  |  | |  | |
|  | | 2.2.2 | (– 8)(5(–2) | | (3) | |
|  | |  |  | |  | |
|  | | 2.2.3  2.2.4  2.2.5 | – 5(2 2 + – 20) + 12 2+3  12p + 3q – 5p – 6q  ( – 2 a b 2 ) 3 | | (3)  (2)  (3) | |
|  | |  |  | |  | |
| 2.3 | | Los op vir  *Solve for* | | |  | |
|  | | 2.3.1 |  | | (2) | |
|  | |  |  | |  | |
|  | | 2.3.2  2.3.3 | 2*x* + 1 = 9 | | (4)  (2) | |
| 2.4 | |  | Die som van drie opeenvolgende natuurlike getalle is 33. Bepaal die drie getalle. | |  | |
|  | |  | *The sum of three consecutive natural numbers is 33. Determine the three numbers* | | (4) | |
|  | |  |  | |  | |
| 2.5 | |  | Vind die waardes van *x* en *y* in die volgende ry:  *Find the values of x any in the following sequence:* | |  | |
|  | |  | 3; 5; 7; *x*; *y*; …. | | (2) | |
|  | |  |  | |  | |
| 2.6 | |  | Ondersoek die gegewe *x* en *y* waardes en bepaal die verwantskap tussen *x* en *y*.  Vind dan die waardes van *a* en *b.*  *Examine the given x and y values and determine the relationship between x and y. Then find the values of a and b.* | |  | |
|  | |  |  | |  | |
|  | |  | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | *x* | 1 | 2 | 3 | 4 | *a* | 10 | | *y* | 4 | 7 | 10 | 13 | 22 | *b* | | |  | |
|  | |  |  | |  | |
|  | | 2.6.1 | *y* = | | (2) | |
|  | | 2.6.2 | *a* = | | (1) | |
|  | | 2.6.3 | *b* = | | (1) | |
|  | |  |  | |  | |
| 2.7 | Ilne het haar tante besoek wat 50 km van haar huis woon. Die grafiek toon die afstand wat Ilne van haar huis weg is tydens die besoek.  *Ilne visited her aunt who stays 50km from their house. The graph below shows how she travelled.* | | | | |  | |
|  | 2.7.1 | | | Hoe laat het Ilne haar huis verlaat?  *What time did Ilne leave her home?* | | (1) | |
|  | 2.7.2 | | | Hoe laat het Ilne by haar tante se huis aangekom?  *What time did she arrive at her aunt’s house?* | | (1) | |
|  | 2.7.3 | | | Hoeveel tyd het Ilne by haar tante deurgebring?  *For how long did she stay at her Aunt’s house?* | | (1) | |
|  | 2.7.4 | | | Hoe laat het Ilne weer tuis gekom?  *What time did she get back home eventually?* | | (1) | |
|  |  | | |  | |  | |
| 2.8 | Gegee *y* = 2*x* – 3.  *Given y = 2x – 3.*   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | *x* | -1 | 0 | 1 | 2 | 3 | | *y* |  |  | – 1 |  |  | | | | | |  | |
|  | 2.8.1 | | | Kopieër en voltooi die table  *Copy and complete the table* | | (2) | |
|  |  | | |  | |  | |
|  | 2.8.2 | | | Op die diagramblad steek die punte van die tabel op die Cartesies vlak af.  Teken die grafiek  *On the diagram sheet plot the points on the Cartesian plane. Draw the graph.* | | (4) | |
|  |  | | |  | | [50] | |
|  |  | | | **TOTAAL 100** | |  | |

DIAGRAMBLAD

*DIAGRAM SHEET*

NAAM VAN LEERDER:

*NAME OF LEARNER*: ………………………………………………

GRADE 8 ( )

Y

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