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

# November/*November*

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

**Wiskunde Tweede Vraestel Tyd/*Time*: 2 ure/*hours***

***Mathematics Second Paper***

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

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| INSTRUKSIES AAN KANDIDATE*INSTRUCTIONS TO CANDIDATES*  1. Hierdie vraestel bestaan uit DRIE vrae. Beantwoord AL DRIE die vrae.   *This question paper consists of THREE questions. Answer ALL THREE questions.*   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 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.*   1. Jy mag ‘n goedgekeurde sakrekenaar gebruik, tensy anders vermeld   *You may use an approved calculator, unless stated otherwise.*  6 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.*  7 Rond AL die finale antwoorde tot TWEE desimale plekke af, tensy anders aangedui.  *Round off ALL the final answers off to TWO decimal places, unless stated otherwise.*  8 Dui meeteenhede aan waar van toepassing.  *Indicate units of measurement, where applicable.*  9. Sterkte!  *Good luck!* |

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| **VRAAG *QUESTION 1*** | | | |  | |  |
| 1.1 | Die histogram hieronder toon die aantal atlete in spesifieke ouderdomsgroepe wat die Twee Oseane Half maraton in Maart 2013 gehardloop het. Die oudste atleet was 79 jaar.  *The histogram below shows the number of athletes in specific age groups who participated in the Two Oceans Half Marathon in March 2013. The oldest runner was 79 years.* | | | | |  |
|  | 1.1.1 | | | Hoeveel atlete onder 30 jaar het die Twee Oseane Half maraton gehardloop? *How many athletes under 30 years participated in the Two Oceans Half marathon?* | | (1) |
|  | 1.1.2 | | | In watter ouderdoms groep was die meeste atlete wat die Twee Oseane Half maraton gehardloop het?  *In what age group did the most athletes participate in the Two Oceans Half Marathon?* | | (1) |
|  | 1.1.3 | | | Hoeveel atlete in totaal het die Twee Oseane Half maraton gehardloop?  *How many athletes in total participated in the Two Oceans Half marathon?* | | (2) |
|  | 1.1.4 | | | Vergelyk die aantal atlete jonger as 50 met die wat 50 en ouer was. Beskryf jou waarneming en gee ‘n moontlike rede vir wat jy opmerk.  *Compare the number of athletes younger than 50 to those 50 and older.* *Describe your observations and give a possible reason for your observations.* | | (2) |
|  | 1.2 Die data stel die ouderdomme voor van 15 vroulike atlete.  *This data set represent the ages of 15 female marathon athletes*  50 34 48 23 49 32 36 37 41 29 42 43 37 38 41 | | | | |  |
|  | 1.2.1  1.2.2  1.2.3 | | | Organiseer die data met behulp van ‘n stingel-en-blaar diagram  *Organise the data with a stem-and-leaf diagram* (4)  Skryf die omvang neer  *Write down the range* (3)  Wat is die modale ouderdom?  *What is the modal age?* (2) | |
|  | 1.2.4  1.2.5 | | | Bereken die gemiddelde ouderdom korrek tot TWEE desimale plekke *Calculate the mean of the ages correct to TWO decimal places.* (4)  Bepaal die mediaan van die ouderdomme  *Determine the median age* (2) | |  |
|  | 1.2.6 Kopieër en voltooi die frekwensie tabel met hierdie ouderdomsgroepe  *Copy and complete the frequency table with this age groups*     |  |  |  | | --- | --- | --- | | Ouderdomsgroepe  *Age groups* | Telmerke  *Tally* | Frekwensie  *Frequency* | | 20 – 29 |  |  | | 30 – 39 |  |  | | 40 – 49 |  |  | | 50 – 59 |  |  | | | | | |  |
|  | (4)  [25] | | | | |  |
| **VRAAG 2**  ***QUESTION 2***  2.1 Voltooi: *Complete:*  2.1.1 Die supplement van 35o is ………………………  *The supplement of 35o is …………………………..*  2.1.2 70o is die …………… van 20o  *70o is the ………………………..of 20o*  2.1.3 ‘n Hoek van 360o word ‘n ……………………..genoem  *An angle of 360o is called a …………………………*  2.1.4 ‘n Driehoek met 3 gelyke sye word ‘n ……………..genoem  *A triangle with three equal sides is called …………………….*  2.1.5 In ‘n reghoekige gelykbenige driehoek is die grootte van die  hoeke ……o, ……o en …….o  *In a right-angled isosceles triangle the sizes of the angles are*  *……o, ……..o and …….o*  2.1.6 Regoorstaande hoeke is …………………  *Vertically opposite angles are ……………..*  (8) | | | | | |  |
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| 2.2  2.3 | Kyk na die tekening en identifiseer die volgende pare hoeke:  *Look at the drawing and identify the following pairs of angles:*    5  1 2 6  3 7  4 8  2.2.1. 1 en / *and* 2  2.2.2 5 en / *and* 7  2.2.3 3 en / *and* 8  2.2.4 3 en / *and* 6  2.2.5 4 en / *and* 8 (5)  Vind die waardes van *x* en *y* in elk van die volgende figure met REDES  *Find the values of x and y in each of the following figures with REASONS*  2.3.1  40o *y*  *x*  (4)  2.3.2 | | | | |  |
|  | *y*  62o *x*  (4)  2.3.3 A B  *y*  40o    C *x* D  E (5)    2.4 In hierdie skets is, AB // EC en AD // BC, ∠ABG = 63o en ∠AGB = 56o  Bereken die grootte van *a, b, c, d* en *e* met REDES  *In this sketch, AB // EC and AD // BC, ∠ ABG = 63 ° and ∠ AGB = 56 °.*  *Determine the size of a, b, c, d and e with REASONS*  A B  *a* 63o  d  56o  G    E *b c* C  *e* D  F (10)  2.5 Los op vir in die driehoek hieronder met redes  *Solve for x in the triangle below with reasons*  *x*  4*x*  2*x* + 40o    (4)  [40] | | | | |  |
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| **VRAAG 3**  ***QUESTION 3*** | | |  | |  | |
| 3.1 | | Bereken hoeveel is AB langer as DE  *Determine how much AB is langer than DE* | | |  | |
| 3.2 | | A      25 E  25      B D  7 C 15 (7)  Bereken die oppervlakte van MNRS as NS = 17 cm  *Determine the area of MNRS if NS = 17 cm* M  11  N 17 S  9    R  (6) | | |  | |
|  | |  | | |  | |
| 3.3.1 | | Bereken die oppervlakte van ‘n sirkel met middellyn d = 14 cm en gebruik π =  *Determine the area of the circle with diameter d=14, and use π =* (4) | | |  | |
| 3.3.2 | | Bereken die omtrek van ‘n sirkel met radius r = 8 cm en gebruik π = 3.14  *Determine the circumference of the circle with radius r = 8 cm and use π = 3.14* (4) | | |  | |
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| 3.4 | | Bereken die omtrek van die volgende atletiekbaan (korrek tot 2 desimale plekke)  *Determine the perimeter of the following athletic track.(correct to two decimal places)* | | |  | |
|  | | 102 m  60 m | | |  | |
| 3.5 | | (6) | | |  | |
|  | | 36  54  72 | | |  | |
| 3.5.1  3.5.2 | | Bereken die buite-oppervlakte van die figuur as lengte = 72 cm, breedte = 54 cm  en hoogte = 36 cm  *Determine the surface area of this figure if the length = 72 cm, breadth = 54 cm*  *and height = 36 cm*  (5)    Bepaal die volume van die figuur  *Determine the volume of this figure.*  (3)  [35]  **TOTAAL: 100** | | |  | |
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