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 |  |
|  | 1.2.11.2.21.2.3 | 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) |
|  | 1.2.41.2.5 | 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  |  |  |

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|  |  (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) |  |
|  |  |  |
| 2.22.3 |  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 82.2.1. 1 en / *and* 22.2.2 5 en / *and* 72.2.3 3 en / *and* 82.2.4 3 en / *and* 62.2.5 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* DE (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* DF (10)2.5 Los op vir $x$ in die driehoek hieronder met redes *Solve for x in the triangle below with reasons* *x* 4*x*2*x* + 40o  (4) [40]  |  |
|  |  |  |
| **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 D7 C 15 (7)Bereken die oppervlakte van MNRS as NS = 17 cm*Determine the area of MNRS if NS = 17 cm* M11N 17 S9R (6) |  |
|  |  |  |
| 3.3.1  | Bereken die oppervlakte van ‘n sirkel met middellyn d = 14 cm en gebruik π = $\frac{22}{7}$*Determine the area of the circle with diameter d=14, and use π =*$\frac{22}{7}$(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) |  |
|  |  |  |
|  |  |  |  |
| 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 m60 m |  |
|   3.5  | (6) |  |
|  |  36 54 72  |  |
| 3.5.13.5.2 | 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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