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# basic education

Department:  
Basic Education  
**REPUBLIC OF SOUTH AFRICA**

## **NATIONAL SENIOR CERTIFICATE/ NASIONALE SENIOR SERTIFIKAAT**

**GRADE/GRAAD 12**

**MATHEMATICAL LITERACY P1/  
WISKUNDIGE GELETTERDHEID V1**

**NOVEMBER 2021**

**MARKING GUIDELINES/NASIENRIGLYNE**

**MARKS/PUNTE: 150**

<b>Symbol/Kode</b>	<b>Explanation/Verduideliking</b>
<b>M</b>	Method/Metode
<b>MA</b>	Method with accuracy/Metode met akkuraatheid
<b>CA</b>	Consistent accuracy/Volgehoue akkuraatheid
<b>A</b>	Accuracy/Akkuraatheid
<b>C</b>	Conversion/Herleiding
<b>S</b>	Simplification/Vereenvoudiging
<b>RT</b>	Reading from a table/graph/document/diagram/Lees vanaf tabel/grafiek/dokument/diagram
<b>SF</b>	Correct substitution in a formula/Korrekte vervanging in 'n formule
<b>O</b>	Opinion/Explanation/Opinie/Verduideliking
<b>P</b>	Penalty, e.g. for no units, incorrect rounding off, etc./Penalisasie, bv. vir geen eenhede, verkeerde afronding, ens.
<b>R</b>	Rounding off/Afronding
<b>NPR</b>	No penalty for rounding/Geen penalisasie vir afronding nie
<b>AO</b>	Answer only/Slegs antwoord
<b>MCA</b>	Method with consistent accuracy/Metode met volgehoue akkuraatheid
<b>RCA</b>	Rounding consistent with accuracy/ Afronding met volgehoue akkuraatheid

**These marking guidelines consist of 20 pages.  
Hierdie nasienriglyne bestaan uit 20 bladsye.**

**NOTE:**

- If a candidate answers a question TWICE, only mark the FIRST attempt.
- If a candidate has crossed out (cancelled) an attempt to a question and NOT redone the solution, mark the crossed out (cancelled) version.
- Consistent accuracy (CA) applies in ALL aspects of the marking guidelines; however it stops at the second calculation error.
- If the candidate presents any extra solution when reading from a graph, table, layout plan and map, then penalise for every extra item presented.

**LET WEL:**

- As 'n kandidaat 'n vraag TWEE KEER beantwoord, sien slegs die EERSTE poging na.
- As 'n kandidaat 'n antwoord van 'n vraag doodtrek (kanselleer) en nie oordoen nie, sien die doodgetrekte (gekanselleerde) poging na.
- Volgehoue akkuraatheid (CA) word in ALLE aspekte van die nasienriglyne toegepas, dit hou op by die tweede berekeningsfout.
- Wanneer 'n kandidaat aflesings vanaf 'n grafiek, tabel, uitlegplan en kaart geneem en ekstra antwoorde gee, penaliseer vir elke ekstra item.

QUESTION/VRAAG 1 [30 MARKS/PUNTE] ANSWER ONLY FULL MARKS			
Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
1.1.1	\$1,258 - \$0,80 ✓MA =\$0,458 ✓CA	1MA subtracting different prices 1CA simplification provided 1 value is correct (2)	F L1 *
1.1.2	11,14 Botswana pula/Botswana pula = \$1 $1 \text{ Botswana Pula} = \frac{1}{11,14} \quad \checkmark \text{MA}$  = 0,089767 US dollar ✓A	1MA dividing by exchange rate  1A simplification <b>No penalty for correct rounding</b> (2)	F L1 *
1.1.3	✓RT    ✓RT Angola; Namibia or/of Botswana	1RT first correct country 1RT second correct country <b>Any two</b> (2)	F L1 *
1.1.4	✓RT 1,258; 1,061; 0,87; 0,796; 0,732; 0,254 ✓A	1RT all correct values 1A correct order (2)	D L1 *
1.1.5	0,833 ✓✓A	2A correct value (2)	P L1 *

Q/V	Solution/Oplossing	Explanation/Verduideliking	T&L
1.2.1	Electricity/Elektrisiteit ✓✓A	2A correct source (2)	D L1
1.2.2	Limpopo / LP / Lim / L-Province/Provinsie ✓✓A	2A province (2)	D L1
1.2.3 (a)	Cost of 1 ℓ of paraffin/Koste van 1 ℓ paraffien  764,59 ÷ 100 ✓MA = R7,6459/ℓ ✓A = R7,65/ℓ	1MA dividing by 100 1A simplification <b>NPR</b> (2)	F L1 *
1.2.3 (b)	Cost of paraffin/Koste van paraffien  R7,65/ℓ × 12,5ℓ ✓MCA = R95,625 = R96,00 ✓R	<b>CA from Question 1.2.3 (a)</b>  1MCA multiply by 12,5ℓ  1R correct rounding (2)	F L1
1.2.4	Solar power <b>OR</b> Coal <b>OR</b> Charcoal <b>OR</b> Wind turbines <b>OR</b> Hydropower <b>OR</b> Generator <b>OR</b> Gel <b>OR</b> Paper <b>OR</b> Straw <b>OR</b> Leaves <b>OR</b> Animal manure (dung) <b>OR</b> Spirits <b>OR</b> Corn stalk ✓✓A  <i>Sonkrag OF Steenkool OF Houtskool OF Windturbines OF Hidrokrag OF Kragopwekker OF Gel OF Papier OF Strooi OF Blare OF Dieremis (mis) OF Spiritus OF Mieliestronk</i>	2A correct source <b>Any one</b> (2)	D L1 *
1.3.1	Survey/Questionnaire/Interview/Google forms <i>Opname/Vraelys/Onderhoud/Google vorms</i> ✓✓A	2A correct instrument (2)	D L1
1.3.2	✓✓A Classifying, preparation, organising, sorting data/ <i>Klassifisering, voorbereiding, organiseren, sortering van data</i>	2A correct step <b>Any one word to describe the step</b> (2)	D L1
1.3.3	Categorical data/Kategorieëse data ✓✓A	2A correct answer (2)	D L1

Q/V	Solution/Oplossing	Explanation/Verduideliking	T&L
1.3.4	Value Added Tax/ <i>Belasting op Toegevoegde Waarde</i> ✓✓A	2A correct answer (2)	F L1
1.3.5	Any company who sells books/ <i>Enige maatskappy wat boeke verkoop</i> ✓✓A  <b>OR/OF</b>  Publishers/ <i>Drukkers</i> ✓✓A  <b>OR/OF</b>  Library/ <i>Biblioteek</i> ✓✓A  <b>OR/OF</b>  Book Club/ <i>Boekklub</i> ✓✓A  <b>OR/OF</b>  Name of a book store/ <i>Naam van 'n boekwinkel</i> ✓✓A  <b>OR/OF</b>  Name of publisher/ <i>Naam van uitgewer</i> ✓✓A	2A correct answer (2)	D L1 *
		<b>[30]</b>	

<b>QUESTION/VRAAG 2 [32 MARKS/PUNTE]</b>			
<b>Q/V</b>	<b>Solution/Oplissing</b>	<b>Explanation/Verduideliking</b>	<b>T&amp;L</b>
2.1.1	Hire purchase agreement/HP/Instalment payment/Loan agreement monthly instalment/Credit option/Credit/Balloon payment option/Residual payment option ✓✓A <i>Huurkoop/HK/Paalement betaling/Lening ooreenkoms met maandelikse paalement/Krediet opsie/Krediet/Ballon betaal opsie/Reswaarde betalings opsie</i>	2A correct definition <b>Any one from given list</b>  (2)	F L1
2.1.2	Ford Figo Deposit/ <i>Deposito</i>  = R215 100 × 5% ✓MA  = R10 755 ✓A	1MA multiplying correct values 1A simplification <b>AO</b>  (2)	F L1 *
2.1.3	72 months : 48 months ✓RT  = 3:2 ✓A	1RT correct values 1A simplification of 2 correct values <div style="border: 1px solid black; padding: 2px;">Accept unit ratio</div> <b>AO</b>  (2)	F L2 *
2.1.4	Ford Figo ✓✓A	2A correct vehicle  (2)	F L1
2.1.5	Monthly admin fee/ <i>Maandelikse administrasie fooi</i>  R3 345 × 2,08% ✓MA = R69,58  Total cost for the VW Polo/ <i>Totale koste vir die VW Polo</i>  = Total monthly instalments + Admin fee + Residual ✓MA                 ✓MA                 ✓RT = (R3 345,00 × 47) + (R69,58 × 47) + R116 759  = R157 215 + R3 270,26 + R116 759 ✓M  = R277 244,26 ✓CA	1MA calculating 2,08%  1MA multiplying correct values 1MA multiplying correct values 1RT correct value  1M adding values  1CA simplification  (6)	F L3 *

Q/V	Solution/Oplossing	Explanation/Verduideliking	T&L
2.1.6	<p>Interest for year 1/<i>Rente vir jaar 1</i></p> $R60\,000,00 \times \frac{4,3}{100} \quad \checkmark \text{MA}$ $= R2\,580,00 \quad \checkmark \text{A}$ <p>Amount end of year 1/<i>Bedrag aan die einde van jaar 1</i></p> $= R60\,000 + R2\,580$ $= R62\,580,00 \quad \checkmark \text{CA}$ <p>Interest for year 2/<i>Rente vir jaar 2</i></p> $62\,580,00 \times \frac{5,1}{100} \quad \checkmark \text{MCA}$ $= R3\,191,58$ <p>Amount end of year 2/<i>Bedrag aan die einde van jaar 2</i></p> $= R62\,580,00 + R3\,191,58$ $= R65\,771,58 \quad \checkmark \text{CA}$ <p>Residual value of Ford Figo</p> $R215\,100 \times 30\% \quad \checkmark \text{M}$ $= R64\,530 \quad \checkmark \text{CA}$ <p>She is correct/<i>Sy is korrek</i> <math>\checkmark \text{O}</math></p> <p style="text-align: center;"><b>OR/OF</b></p> $\begin{array}{ccc} \checkmark \text{M} & \checkmark \text{MA} & \checkmark \text{MA} \\ R60\,000,00 \times \frac{104,3}{100} \times \frac{105,1}{100} & & \end{array} \quad \checkmark \text{M}$ $= R65\,771,58 \quad \checkmark \text{CA}$ <p>Residual value of Ford Figo</p> $R215\,100 \times 30\% \quad \checkmark \text{M}$ $= R64\,530 \quad \checkmark \text{CA}$ <p>She is CORRECT/<i>Sy is KORREK</i> <math>\checkmark \text{O}</math></p>	<p>1MA calculating percentage</p> <p>1A simplification</p> <p>1CA adding interest</p> <p>1MCA calculating percentage</p> <p>1CA simplification</p> <p>1M calculating 30%</p> <p>1CA simplification</p> <p>1O conclusion.</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>1MA adding percentage</p> <p>1MA adding percentage</p> <p>1M calculating percentage</p> <p>1M compound calculation</p> <p>1CA simplification</p> <p>1M calculating 30%</p> <p>1CA simplification</p> <p>1O conclusion.</p> <p style="text-align: right;">(8)</p>	F L4 *

Q/V	Solution/Oplossing	Explanation/Verduideliking	T&L
2.2.1	3/Three/Drie ✓✓A	2A correct number (2)	F L1
2.2.2	ABC made For You S <b>OR/OF</b> made For You S ✓✓A	2A correct device (2)	F L1
2.2.3	VAT calculation/BTW-berekening  $= (R355,65 + R260 + R337,35) \times 15\%$ ✓M $= R953,00 \times 15\%$ ✓A $= R142,95$	1M adding correct values 1A multiplying by 15% <div style="border: 1px solid black; padding: 2px;">Accept individual correct calculations: R53,3475 R39,00 R50,60</div> (2)	F L1
2.2.4	$A = R355,65 + R260 + R337,35 + R142,95$ ✓MA $= R1\ 095,95$ ✓CA  <b>OR/OF</b>  $A = R953 \times 1,15$ ✓MA $= R1\ 095,95$ ✓CA  <b>OR/OF</b>  $A = R953 + R142,95$ ✓MA $= R1\ 095,95$ ✓CA	<b>CA from Question 2.2.3</b> 1MA adding correct values 1CA simplification  <b>OR/OF</b>  1MA multiplying by 1,15 1CA simplification  <b>OR/OF</b>  1MA adding correct values 1CA simplification <b>AO</b> (2)	F L2
2.2.5	Impossible /Not possible/No chance/Zero percent/Zero/Zero out of three ✓✓A Onmoontlik/Nie moontlik nie/Geen kans/Nul persent/Nul/Nul uit drie	2A correct term   (2)	P L2
		<b>[32]</b>	

QUESTION/VRAAG 3 [26 MARKS/PUNTE]			
Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
3.1.1	✓A    ✓A 29 March 2021/29 Maart 2021 <b>OR/OF</b> 29/03/2021	1A correct day 1A correct month and year (2)	D L1
3.1.2	✓✓A One hundred and twenty eight million cubic metres/ <i>Een honderd agt en twintig miljoen kubieke meter</i>	2A number in words <b>NPU</b> (2)	D L1 *
3.1.3	KwaZulu-Natal <b>OR/OF</b> KZN ✓✓A	2A correct province (2)	D L1
3.1.4	Free State/Vrystaat/FS ✓✓A	2A Free State (2)	D L2
3.1.5	Mean/Gemiddeld $83 = \frac{\text{D} + \text{D} + 73 + 82 + 88 + 89 + 99 + 101 + 105}{9}$ ✓SF ✓MA $83 = \frac{2\text{D} + 637}{9}$ ✓CA $2\text{D} + 637 = 747$ $2\text{D} = 110$ ✓MA $\text{D} = 55$ ✓CA  <b>OR/OF</b>  ✓SF $2\text{D} + 637 = 83 \times 9$ ✓MA $2\text{D} + 637 = 747$ ✓CA $2\text{D} = 110$ ✓MA $\text{D} = 55$ ✓CA	1SF substitution mean correctly 1MA dividing by 9  1CA simplification  1MA dividing by 2 1CA simplification  <b>OR/OF</b>  1SF substitution mean correctly 1MA multiplying by 9 1CA simplification 1MA dividing by 2 1CA simplification (5)	D L3
3.1.6	Probability/Waarskynlikheid $= \frac{1}{9}$ ✓A ✓A	1A numerator  1A denominator (2)	P L2 *

Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
3.1.7	$\begin{aligned} &\checkmark A \\ &= 15\,657\,000\,000 \times \frac{99}{100} \quad \checkmark MA \\ &= 15\,500\,430\,000 \quad \checkmark CA \end{aligned}$	1A correct value in millions  1MA multiplying by %  1CA simplification <div style="border: 1px solid black; padding: 2px;">Accept 15 500,43 million</div> (3)	D L2 *
3.2.1	Percentage increase/ <i>Persentasie toename</i>  $\begin{aligned} &\checkmark SF \\ &= \frac{4,3 - 1,7}{1,7} \times 100\% \\ &\quad \checkmark A \\ &= 152,94\% \quad \checkmark CA \end{aligned}$	1SF correct substitution 1A correct denominator  1CA simplification <b>NPR</b>  (3)	D L2
3.2.2	Save energy (kWh)/ <i>Bespaar energie (kWh)</i> $\checkmark\checkmark A$  <p style="text-align: center;"><b>OR/OF</b></p> Save water (kl)/ <i>Bespaar water (kl)</i> $\checkmark\checkmark A$  <p style="text-align: center;"><b>OR/OF</b></p> Save money/ <i>Spaar geld</i> $\checkmark\checkmark A$	2A reason        (2)	D L4
3.2.3	Range of the number of litres/ <i>Omvang van die getal liter</i> $\checkmark RT \quad \checkmark RT$ $120 \ell - 30 \ell$  $= 90 \ell \quad \checkmark CA$  <p style="text-align: center;"><b>OR/OF</b></p> Difference in time/ <i>Verskil in tyd</i> $8 \text{ min} - 2 \text{ min}$ Range/ <i>Omvang</i> = 6 min $\checkmark RT$ $6 \text{ min} \times 15 \text{ litres/min} \quad \checkmark M$ $= 90 \text{ litres} \quad \checkmark CA$	<b>Accept litres from 28 – 32</b> 1RT minimum 1RT maximum  1CA simplification   <p style="text-align: center;"><b>OR/OF</b></p> 1RT difference in time 1M multiply by 15 min 1CA simplification <b>NPU</b>  (3)	D L3
		<b>[26]</b>	

<b>QUESTION/VRAAG 4 [35 MARKS/PUNTE]</b>			
<b>Q/V</b>	<b>Solution/Oplossing</b>	<b>Explanation/Verduideliking</b>	<b>T&amp;L</b>
4.1.1	<p>Cost of 520 g/<i>Koste van 520 g</i></p> $520 \text{ g} = \frac{520}{1\,000} \times \text{Rs}200 \quad \checkmark \text{C}$ $= \text{Rs}104 \quad \checkmark \text{CA}$ <p style="text-align: center;"><b>OR/OF</b></p> <p>Unit cost per gram/<i>Eenheidsprys per gram</i></p> $\text{Rs } 200 \div 1\,000 \text{ g} \quad \checkmark \text{C}$ $= \text{Rs } 0,20/\text{g}$ $\text{Rs } 0,20/\text{g} \times 520 \text{ g} \quad \checkmark \text{MA}$ $= \text{Rs } 104 \quad \checkmark \text{CA}$	<p>1C conversion 1MA multiplying by correct value 1CA simplification</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>1C conversion 1MA multiplying by correct value 1CA simplification</p> <p style="text-align: right;">(3)</p>	F L2 *
4.1.2	<p>Total cost of one plate/<i>Totale koste van een bord</i></p> $(\text{Rs}200 + \text{Rs}120 + \text{Rs}10 + \text{Rs}62) \div 8$ $= \frac{\text{Rs } 392}{8} \quad \checkmark \text{A}$ $= \text{Rs}49 \quad \checkmark \text{CA}$ <p>Total cost including food container/ <i>Totale koste voedselhouer ingesluit</i></p> $= \text{Rs}49 + \text{Rs}2,43 \quad \checkmark \text{MA}$ $= \text{Rs}51,43 \quad \checkmark \text{CA}$ <p style="text-align: center;"><b>OR/OF</b></p>	<p>1A total ingredients 1MA divide by 8 1CA simplification</p> <p>1MA adding the container 1CA simplification</p> <p style="text-align: center;"><b>OR/OF</b></p>	F L3

Q/V	Solution/Oplossing	Explanation/Verduideliking	T&L
4.1.2	<p>Total cost of 8 plates/<i>Totale koste van 8 borde</i></p> $= \text{Rs}200 + \text{Rs}120 + \text{Rs}10 + \text{Rs}62 + (\text{Rs}2,43 \times 8)$ <p>✓A</p> $= 392 + (2,43 \times 8) \quad \checkmark \text{MA}$ $= \text{Rs}411,44 \quad \checkmark \text{CA}$ <p>Total cost of one plate/<i>Totale koste van een bord</i></p> $= \frac{411,44}{8} \quad \checkmark \text{MA}$ $= \text{Rs}51,43 \quad \checkmark \text{CA}$ <p style="text-align: center;"><b>OR/OF</b></p> <p>Total cost of one plate/<i>Totale koste van een bord</i></p> $= \frac{\text{Rs}200}{8} + \frac{\text{Rs}120}{8} + \frac{\text{Rs}10}{8} + \frac{\text{Rs}62}{8} \quad \checkmark \text{MA}$ $= \text{Rs}25 + \text{Rs}15 + \text{Rs}1,25 + \text{Rs}7,75 \quad \checkmark \text{CA}$ $= \text{Rs}49 \quad \checkmark \text{A}$ <p>Total cost including food container/<i>Totale koste insluitend koshouer</i></p> $= \text{Rs}49 + \text{Rs}2,43 \quad \checkmark \text{MA}$ $= \text{Rs}51,43 \quad \checkmark \text{CA}$	<p>1A total ingredients 1MA adding the container</p> <p>1CA simplification</p> <p>1MA divide by 8 1CA simplification</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>1MA divide by 8 1CA simplification 1A total ingredients</p> <p>1MA adding 1CA simplification</p> <p style="text-align: right;">(5)</p>	

Q/V	Solution/Oplossing	Explanation/Verduideliking	T&L
4.1.3	<p>Profit of one plate/<i>Wins van een bord</i>  ✓MA  <math>\text{Rs}80 - \text{Rs}51,43 = \text{Rs}28,57</math> ✓CA</p> <p>% profit of one plate/% <i>wins van een bord</i>  <math>= \frac{\text{Rs}28,57}{\text{Rs}51,43} \times 100\%</math> ✓M  <math>= 55,55\%</math> ✓CA</p> <p>Bobby's claim is VALID/<i>Bobby se eis is GELDIG</i> ✓O</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>✓✓A  <math>\text{Rs}51,43 \times 1,5</math> ✓MA  <math>= \text{Rs}77,15</math> ✓CA</p> <p><math>\text{Rs}80,00 &gt; \text{Rs}77,15</math></p> <p>Bobby's claim is VALID/<i>Bobby se eis is GELDIG</i> ✓O</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>Percentage income/<i>Persentasie inkomste</i>  <math>= \frac{\text{Rs}80}{\text{Rs}51,43} \times 100\%</math> ✓MA  <math>= 155,55\%</math> ✓CA</p> <p>Percentage profit/<i>Persentasie wins</i>  <math>155,55\% - 100\%</math> ✓M  <math>= 55,55\%</math> ✓CA</p> <p>Bobby's claim is VALID/<i>Bobby se eis is GELDIG</i> ✓O</p>	<p><b>CA from Question 4.1.2</b></p> <p>1MA subtracting CP from SP  1CA simplification  1M percentage calculation  1CA simplification  1O conclusion</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>2A calculating 1,5  1MA multiplying  1CA simplification  1O conclusion</p> <p style="text-align: center;"><b>OF/OR</b></p> <p>1MA percentage calculation  1CA simplification  1M subtracting values  1CA simplification  1O conclusion</p>	F L4

Q/V	Solution/Oplossing	Explanation/Verduideliking	T&L
4.1.3	<p style="text-align: center;"><b>OF/OR</b></p> <p>50% of cost price/50% van die kosprys</p> <p>= Rs 51,43 x 50% ✓MA = Rs 25,72 ✓CA</p> <p>Profit per plate/Wins per bord</p> <p>= Rs 80 – Rs 51,43 ✓M = Rs 28,57 ✓CA</p> <p>Rs 28,57 &gt; Rs 25,72</p> <p>Bobby's claim is VALID/Bobby se eis is GELDIG ✓O</p>	<p style="text-align: center;"><b>OF/OR</b></p> <p>1MA percentage calculation 1CA simplification</p> <p>1M subtracting values 1CA simplification</p> <p>1O conclusion</p> <p style="text-align: right;">(5)</p>	
4.1.4	<p>Cost of masala/Koste van masala ✓RT</p> <p>= <math>\frac{\text{Rs}10}{\text{Rs}1} \times 0,206839</math> ✓MA = R2,06839 = R2,07 ✓A</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>Cost of masala/Koste van masala</p> <p>= <math>\frac{\text{Rs}10}{4,834670}</math> ✓RT ✓MA = R2,06839 = R2,07 ✓A</p>	<p>1RT correct values 1MA multiplying by 0,260839 1A simplification</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>1RT correct values 1MA dividing 1A simplification</p> <p style="text-align: right;">(3)</p>	F L2
4.2.1	<p>Cost (R) = 600,00 + 13 <math>p</math>, where <math>p</math> = number of plates. ✓SF</p> <p>1 380,00 = 600,00 + 13<math>p</math> 1 380,00 – 600,00 = 13<math>p</math> ✓MA ✓CA R780 = 13 <math>p</math> <math>p</math> = 60 plates ✓CA</p>	<p>1SF correct substitution</p> <p>1MA subtracting 600 1CA simplification 1CA simplification <b>AO</b></p> <p style="text-align: right;">(4)</p>	F L2 *

Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L																																
4.2.2	<div><div>Janet's Business graphs for plates of Biryani</div><table><thead><tr><th>Number of Plates</th><th>0</th><th>10</th><th>30</th><th>50</th><th>70</th><th>90</th><th>100</th></tr></thead><tbody><tr><td>Cost (R)</td><td>600</td><td>730</td><td>990</td><td>1250</td><td>1 510</td><td>1 770</td><td>1 900</td></tr></tbody></table></div> <p>1A Start point (0;600) 1A End point (100; 1 900) 1A Correct straight line</p> <table><thead><tr><th>Number of Plates</th><th>0</th><th>10</th><th>30</th><th>50</th><th>70</th><th>90</th><th>100</th></tr></thead><tbody><tr><td>Cost (R)</td><td>600</td><td>730</td><td>990</td><td>1250</td><td>1 510</td><td>1 770</td><td>1 900</td></tr></tbody></table>	Number of Plates	0	10	30	50	70	90	100	Cost (R)	600	730	990	1250	1 510	1 770	1 900	Number of Plates	0	10	30	50	70	90	100	Cost (R)	600	730	990	1250	1 510	1 770	1 900		F L2
Number of Plates	0	10	30	50	70	90	100																												
Cost (R)	600	730	990	1250	1 510	1 770	1 900																												
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Cost (R)	600	730	990	1250	1 510	1 770	1 900																												

(3)

(3)

Q/V	Solution/Oplossing	Explanation/Verduideliking	T&L
4.2.3	50 plates ✓✓RT	2RT number of plates (2)	F L2 *
4.3.1	$= \frac{18,7}{100} \quad \checkmark \text{RT}$ $= 0,187 \quad \checkmark \text{CA}$	1RT reading 18,7 1CA simplification <b>AO</b> (2)	P L2 *
4.3.2	As the time increase the number of tourists visiting India increases./ ✓✓A <i>Soos die tyd verbygaan, neem die aantal toeriste wat Indië besoek toe.</i>	2A increases <div style="border: 1px solid black; padding: 2px; display: inline-block;">Accept increase</div> (2)	D L4
4.3.3	Number of tourist from Bangladesh/Aantal toeriste uit Bangladesj $10,93 \text{ million} \times \frac{37,1}{100} \quad \checkmark \text{RT} \quad \checkmark \text{M}$ $= 4,05503 \text{ million/miljoen} \quad \checkmark \text{CA}$ $= 4\,055\,030$ <p>His statement is NOT CORRECT/Sy bewering is NIE KORREK NIE. ✓O</p> <p style="text-align: center;"><b>OR/OF</b></p> Number of tourist from Bangladesh/Aantal toeriste uit Bangladesj $= \frac{4,5 \text{ million/miljoen}}{10,93 \text{ million/miljoen}} \times 100\% \quad \checkmark \text{M}$ $= 41,1\% \quad \checkmark \text{CA}$ <p>Then 37,1% is less than the 41,1%</p> <p>His statement is NOT CORRECT/Sy bewering is NIE KORREK NIE. ✓O</p>	1RT correct percentage 1M multiply with percentage provided one value is correct 1CA simplification  1O conclusion  1RT correct values 1M multiply with percentage provided one value is correct 1CA simplification  1O conclusion (4)	D L4 *

Q/V	Solution/Oplossing	Explanation/Verduideliking	T&L
4.3.4	Due to the <b>rounding</b> of large numbers in converting to a percentage/ ✓✓A <i>As gevolg van die <b>afronding</b> van groter getalle tydens die omskakeling na 'n persentasie.</i>	2A stating rounding  (2)	D L4
		[35]	

<b>QUESTION/VRAAG 5 [27 MARKS/PUNTE]</b>			
<b>Q/V</b>	<b>Solution/Oplossing</b>	<b>Explanation/Verduideliking</b>	<b>T&amp;L</b>
5.1.1	<p>Tax Bracket 4/<i>Belastinghakkie 4</i> ✓✓A</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>Tax Bracket/<i>Belastinghakkie</i> R423 301 – R555 600 ✓✓A</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>100 263 + 36% of taxable income above 423 300 ✓✓A</p>	<p>2A correct tax bracket</p> <p style="text-align: right;">(2)</p>	F L2
5.1.2	<p>Annual tax/<i>Jaarlikse belasting</i></p> <p>R423 301 – R555 600 100 263 + 36% of taxable income above 423 300</p> <p>R100 263 + 36% (R551 762 – R423 300) ✓SF R100 263 + (36% × R128 462) ✓CA</p> <p>R100 263 + R46 246,32 = R146 509,32 ✓CA</p> <p>Tax payable/<i>Belasting betaalbaar</i></p> <p>= R146 509,32 – R14 220 ✓MCA</p> <p>= R132 289,32 ✓CA</p>	<p><b>CA from Question 5.1.1</b></p> <p>1SF substitution 1CA simplification</p> <p>1CA tax before rebate</p> <p>1MCA subtracting rebate</p> <p>1CA simplification</p> <p style="text-align: right;">(5)</p>	F L3

Q/V	Solution/Oplossing	Explanation/Verduideliking	T&L
5.1.3	<p>Present monthly tax payable  <math>= R132\,289,32 \div 12</math> ✓MA  <math>= R11\,024,11</math></p> <p>Annual tax payable one year older  <math>R132\,289,32 - R7\,794</math> ✓A  <math>= R124\,495,32</math> ✓MA</p> <p>Monthly tax payable one year older  <math>R124\,495,32 \div 12</math>  <math>= R10\,374,61</math> ✓CA</p> <p>Monthly tax savings  <math>R11\,024,11 - R10\,374,61</math>  <math>= R649,50</math> ✓CA</p> <p>His statement is CORRECT/Sy bewering is KORREK ✓O</p> <p style="text-align: center;"><b>OR/OF</b></p> <p style="text-align: center;">✓RT</p> <p><math>R132\,289,32 - R124\,495,32</math>  <math>= R7\,794</math> ✓✓A</p> <p><math>R7\,794 \div 12</math> ✓MA</p> <p><math>= R649,50</math> ✓CA</p> <p>His statement is CORRECT/Sy bewering is KORREK. ✓O</p>	<p><b>CA from Question 5.1.2</b></p> <p>1MA dividing by 12 and simplify</p> <p>1A correct rebate – R7 794  1MA subtracting rebate and simplification</p> <p>1CA simplification</p> <p>1CA simplification</p> <p>1O conclusion</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>1RT correct values  2A correct rebate – R7 794</p> <p>1MA dividing by 12</p> <p>1CA simplification</p> <p>1O conclusion</p>	F L4 *

Q/V	Solution/Oplossing	Explanation/Verduideliking	T&L
5.1.3	<p style="text-align: center;"><b>OR/OF</b></p> <p>Annual tax payable one year older/<i>Jaarlikse belasting betaalbaar een jaar ouer</i></p> <p>= R146 509,32 - R14 220 - R7 794 ✓MA</p> <p>= R124 495,32 ✓A</p> <p>Annual tax payable/<i>Jaarlikse belasting betaalbaar</i></p> <p>= R132 289,32</p> <p>Monthly tax savings/<i>Maandelikse belasting besparing</i></p> <p style="text-align: center;">✓M</p> <p>= <math>\frac{R132\,289,32 - R124\,495,32}{12}</math> ✓MA</p> <p>= R649,50 ✓CA</p> <p>His statement is CORRECT/<i>Sy bewering is KORREK.</i> ✓O</p>	<p style="text-align: center;"><b>OR/OF</b></p> <p>1MA subtracting rebate and simplification 1A correct tax payable</p> <p>1M simplification 1MA dividing by 12 1CA simplification 1O conclusion</p> <p style="text-align: right;">(6)</p>	
5.1.4	<p>Medical credits/<i>Mediese krediete:</i></p> <p style="text-align: center;">✓RT</p> <p>R310 + R310 + (R209 × 2) ✓MA</p> <p>R310 + R310 + R418 ✓MA</p> <p>= R1 038 ✓CA</p>	<p>1RT correct values 1MA multiplying with 2</p> <p>1MA adding all the values 1CA simplification <b>AO</b></p> <p style="text-align: right;">(4)</p>	F L3
5.2.1 (a)	Huawei ✓✓RT	2RT correct brand (2)	D L2 *
5.2.1 (b)	21,5% ✓✓RT	<b>CA from Question 5.2.1 (a)</b> 2RT correct percentage (2)	D L2 *
5.2.2	<p><math>IQR = Q3 - Q1 / IKV = K3 - K1</math> ✓MA</p> <p style="text-align: center;">✓RT    ✓RT</p> <p>= 18,75 - 15,7</p> <p>= 3,05 ✓CA</p>	<p>1MA concept of IQR 1RT correct value (Q3) 1RT correct value (Q1)</p> <p>1CA simplification</p> <p style="text-align: right;">(4)</p>	D L3 *

Q/V	Solution/Oplossing	Explanation/Verduideliking	T&L
5.2.3	<p>Quartile 3 is at 15,95 which includes 75% of the dataset.  <i>Kwartiel 3 is by 15,95 wat 75% van die datastel insluit. ✓O</i>  The statement is VALID/<i>Die bewering is GELDIG. ✓O</i></p> <p style="text-align: center;"><b>OR/OF</b></p> <p>15,95% &lt; 16% which is Quartile 3 which includes 75% of the dataset.  <i>15,95% &lt; 16% wat Kwartiel 3 is wat 75% van die datastel insluit ✓O</i>  The statement is VALID/<i>Die bewering is GELDIG ✓O</i></p> <p style="text-align: center;"><b>OR/OF</b></p> <p>The 75<sup>th</sup> percentile is below the 16% on the Box and whisker plot.  <i>Die 75ste persentiel is onder die 16% op die Mond en snor diagram. ✓O</i>  The statement is VALID/<i>Die bewering is GELDIG ✓O</i></p>	<p>1O explanation 1O conclusion</p> <p style="text-align: right;">(2)</p>	D L4 *
		[27]	
		<b>TOTAL/TOTAAL: 150</b>	