

MATHEMATICAL LITERACY Gr.12

TAX.

Including the following

Content	Page Number
Steps to determine tax owed.	2
Examples from Past Papers with notes	
Math Lit P1 Nov 2020 DBE	3
Math Lit P1 Nov 2021 DBE	5
Math Lit P1 Nov 2022 DBE	9

STEPS TO DETERMINING TAX OWED:

2

- ① Determine **GROSS INCOME** → income before deductions
- ② Add any **FRINGE BENEFITS**
 - ↳ travel allowance → forms part of gross income
- ③ Deduct **EXEMPT INCOME**
 - ↳ retirement annuities
 - ↳ pensions → limited to R1750/annum
 - ↳ provident fund contributions → max of 7.5% of gross income
 - ↳ UIF contribution → 1% of income
- ④ Calculate **taxable income** based on the six categories "statutory rates applicable to the individual"
- ⑤ Check that the person is above **threshold:** (or they don't pay tax)
 - a) under 65
 - b) over 65
 - c) over 75] goes according to age
(SARS may refund money)
- ⑥ Subtract any **REBATES and CREDIT**
 - ↳ Primary rebate (under 65)
 - ↳ secondary rebate (65 to 74)
 - ↳ tertiary rebate (75 and older)
 - ↳ MEDICAL SCHEME CREDIT (only under 65's) / per month

employed people over 65 receive both primary & secondary rebate.

 - a) main member → person paying tax
 - b) 1st dependent → spouse / child
 - c) 2nd dependent → child / second child

(3rd dependent doesn't get a credit.)

WORKED EXAMPLE ①

Math Lit P1 NOV 2020 DBE

2.2

Dean, a 25-year-old male, earns a taxable income of R305 174,44. He started his first job on 1 March 2019.

Tax payable by an individual for the tax year 1 March 2019 to 29 February 2020 is indicated in TABLE 1 below.

TABLE 1: INCOME TAX RATES FOR INDIVIDUALS

2019/2020 TAX YEAR (1 MARCH 2019 TO 29 FEBRUARY 2020)

TAX BRACKET	TAXABLE INCOME (R)	TAX RATES (R)
1	0–195 850	18% of taxable income
2	195 851–305 850	35 253 + 26% of taxable income above 195 850
3	305 851–423 300	63 853 + 31% of taxable income above 305 850
4	423 301–555 600	100 263 + 36% of taxable income above 423 300
5	555 601–708 310	147 891 + 39% of taxable income above 555 600
6	708 311–1 500 000	207 448 + 41% of taxable income above 708 310
7	1 500 001 and above	532 041 + 45% of taxable income above 1 500 000

[Adapted from www.treasury.gov.za/Rapport]

NOTE: Dean is not a member of a medical aid.

Use TABLE 1 to answer the questions that follow.

2.2.1 Name the government institution responsible for collecting tax return forms. (2)

2.2.2 Write down the tax bracket that will be used to calculate Dean's tax payable. (2)

2.2.3 Calculate the monthly tax payable by Dean before any rebates are deducted. (5)

2.2.4 TABLE 2 below indicates the rebates for the 2018/2019 and 2019/2020 tax years.

TABLE 2: REBATES FOR 2018/2019 AND 2019/2020 TAX YEARS

TAX REBATES	TAX YEAR 2019/2020	TAX YEAR 2018/2019
Primary (age below 65)	R14 067	R14 220
Secondary (age 65 and above)	R7 713	R7 794
Tertiary (age 75 and older)	R2 574	R2 601

[Adapted from www.treasury.gov.za/Rapport]

(a) Identify the tax rebate(s) that Dean qualifies for in the 2019/2020 tax year. (2)

(b) State the number of tax rebates a 75-year-old man will qualify for in any tax year. (2)

Answer:

4

Q/V	Solution/Oplossing	Explanation/Verduideliking	T&L
2.2.1	South African Revenue Services/SARS Revenue Services ✓✓A <i>Suid Afrikaanse Inkomstedienste/SAID</i> <i>Inkomste(belasting)dienste</i>	2A name (2)	F L1
2.2.2	2 / TWO / TWEE ✓✓A OR/OF 7 / SEVEN / SEWE	2A correct bracket (2)	F L1

2.2.3	<p>Annual tax before rebates/ <i>Jaarlikse inkomstebelasting voor belastingkortings</i></p> <p>= R35 253 + 26% of taxable income above 195 850 → tax bracket 2 = R35 253 + 26% × (R305 174,44 – R195 850) ✓SF = R35 253 + R28 424,35 ✓M = R63 677,35 ✓CA</p> <p>Monthly tax before rebates/ <i>Maandelikse inkomstebelasting voor belastingkortings</i></p> <p>= R63 677,35 ÷ 12 ✓MCA 12 months. = R5 306,45 ✓CA</p> <p>OR/OF</p> <p>Annual tax before rebates/ <i>Jaarlikse inkomstebelasting voor belastingkortings</i></p> <p>= R532 041 + 45% of taxable income above 1 500 000 = R532 041 + 45% × (R3 662 093,28 – R1 500 000) ✓SF = R532 041 + R972 941,98 ✓M = R1 504 982,98 ✓CA</p> <p>Monthly tax before rebates/ <i>Maandelikse inkomstebelasting voor belastingkortings</i></p> <p>= R1 504 982,98 ÷ 12 ✓MCA = R125 415,25 ✓CA</p>	<p>CA from question 2.2.2</p> <p>1SF correct substitution 1M adding correct amounts 1CA simplification</p> <p>1MCA dividing by 12 1CA simplification NPR</p>	r L3
-------	--	--	---------

2.2.4(a)	<p>✓✓RT → under 65 yrs old Primary rebate/Primêre korting OR/OF R14 067,00</p>	<p>2RT reading from the table (2)</p>	(5) F L1
2.2.4(b)	<p>3/THREE/DRIE ✓✓A primary + secondary + tertiary</p>	<p>2A correct number of rebates (2)</p>	F L1

QUESTION 5

- 5.1 Marius, who is 64 years old, earned an annual taxable income of R551 762,00 for the 2019/20 tax year. During the 2019/20 tax year Marius was not a member of any medical fund.

TABLE 7 below shows the tax table for the 2019/20 tax year.

TABLE 7: TAX RATES FOR 2019/20 TAX YEAR (1 Mar. 2019 to 28 Feb. 2020)

TAX BRACKET	TAXABLE INCOME (R)	RATES OF TAX (R)
1	1–195 850	18% of taxable income
2	195 851–305 850	35 253 + 26% of taxable income above 195 850
3	305 851–423 300	63 853 + 31% of taxable income above 305 850
4	423 301–555 600	100 263 + 36% of taxable income above 423 300
5	555 601–708 310	147 891 + 39% of taxable income above 555 600
6	708 311–1 500 00	207 448 + 41% of taxable income above 708 310
7	1 500 001 and above	532 041 + 45% of taxable income above 1 500 00

[Adapted from www.sars.gov.za]

TABLE 8 below shows the tax rebates and medical credits for the 2019/20 tax year.

TABLE 8: TAX REBATES AND MEDICAL AID CREDITS FOR THE 2019/20 TAX YEAR

TAX REBATE	
Primary	R14 220
Secondary (65 and older)	R7 794
Tertiary (75 and older)	R2 601
MEDICAL CREDITS PER MONTH FOR MEDICAL FUND MEMBERS	
Main member	R310
First dependent	R310
Each additional dependent	R209

[Adapted from www.sars.gov.za]

Use TABLE 7 and TABLE 8 above to answer the questions that follow.

- 5.1.1 Identify which tax bracket Marius falls in, based on his taxable income. (2)
- 5.1.2 Calculate the amount of tax Marius must pay for the 2019/20 tax year. (5)
- 5.1.3 Marius stated that if he had been one year older, he would have saved more than R600 monthly on taxes paid during the 2019/20 tax year.
- Verify, showing ALL calculations whether his statement is CORRECT. (6)
- 5.1.4 Marius is considering joining a medical fund. He plans to include his wife and two grandchildren.
- Determine the total monthly medical credits he would qualify for if he joined a medical fund. (4)

Answer:

6

QUESTION/VRAAG 5 [27 MARKS/PUNTE]			
Q/V	Solution/Oplossing	Explanation/Verduideliking	T&L
5.1.1	<p>Tax Bracket 4/Belastinghakkie 4 ✓✓A</p> <p>OR/OF</p> <p>Tax Bracket/Belastinghakkie R423 301 – R555 600 ✓✓A</p> <p>OR/OF</p> <p>100 263 + 36% of taxable income above 423 300 ✓✓A</p>	<p>2A correct tax bracket</p> <p>(2)</p>	F L2
5.1.2	<p>Annual tax/Jaarlikse belasting</p> <p>R423 301 – R555 600</p> <p>100 263 + 36% of taxable income above 423 300 → income (gross)</p> <p>R100 263 + 36% (R551 762 – R423 300) ✓SF</p> <p>R100 263 + (36% × R128 462) ✓CA</p> <p>R100 263 + R46 246,32 = R146 509,32 ✓CA</p> <p>Tax payable/Belasting betaalbaar → under 65 / primary rebate only</p> <p>= R146 509,32 – R14 220 ✓MCA</p> <p>= R132 289,32 ✓CA</p>	<p>CA from Question 5.1.1</p> <p>1SF substitution ICA simplification</p> <p>ICA tax before rebate</p> <p>1MCA subtracting rebate</p> <p>ICA simplification</p> <p>(5)</p>	F L3

Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
5.1.3	<p>Present monthly tax payable $= R132\,289,32 \div 12$ ✓MA $= R11\,024,11$ → months</p> <p>Annual tax payable one year older $R132\,289,32 - R7\,794$ ✓A $= R124\,495,32$ ✓MA → add a secondary rebate 65yrs old</p> <p>Monthly tax payable one year older $R124\,495,32 \div 12$ $= R10\,374,61$ ✓CA</p> <p>Monthly tax savings → 66yrs - 65yrs $R11\,024,11 - R10\,374,61$ $= R649,50$ ✓CA</p> <p>His statement is CORRECT/Sy bewering is KORREK ✓O</p> <p style="text-align: center;">OR/OF</p> <p>✓RT $R132\,289,32 - R124\,495,32$ $= R7\,794$ ✓✓A</p> <p>$R7\,794 \div 12$ ✓MA $= R649,50$ ✓CA</p> <p>His statement is CORRECT/Sy bewering is KORREK. ✓O</p>	<p>CA from Question 5.1.2</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;">OR/OF</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>	<p>F L4 *</p> <p>alternative method</p>

Q/V	Solution/Oplossing OR/OF	Explanation/Verduideliking OR/OF	T&L
5.1.3	<p>Annual tax payable one year older/Jaarlikse belasting betaalbaar een jaar ouer</p> $= R146\,509,32 - R14\,220 - R7\,794 \checkmark MA$ $= R124\,495,32 \checkmark A$ <p>Annual tax payable/Jaarlikse belasting betaalbaar</p> $= R132\,289,32$ <p>Monthly tax savings/Maandelikse belasting besparing</p> $= \frac{R132\,289,32 - R124\,495,32}{12} \checkmark MA$ $= R649,50 \checkmark CA$ <p>His statement is CORRECT/Sy bewering is KORREK. $\checkmark O$</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>(6)</p>	
5.1.4	<p>Medical credits/Mediese krediete:</p> <p>$\checkmark RT \rightarrow$ 1st dependent \rightarrow taken from table 7 above</p> $R310 + R310 + (R209 \times 2) \checkmark MA$ <p>\checkmark 2nd & 3rd dependent</p> $R310 + R310 + R418 \checkmark MA$ $= R1\,038 \checkmark CA$	<p>1RT correct values 1MA multiplying with 2 1MA adding all the values 1CA simplification AO</p> <p>(4)</p>	F L3

tax
payer

WORKED EXAMPLE (3)

MATH LIT P1 NOV 2022 DRE

2.3

Ms Nande is a 53-year-old and earned a gross income of R39 486 per month during the 2021/2022 tax year.
A non-taxable monthly deduction of 7,5% was made from her salary and paid into her pension fund.

TABLE 4 below shows the tax table for the 2022 tax year ended 28 February 2022.

TABLE 4: TAX RATES FOR 2021/2022 TAX YEAR (1 Mar. 2021–28 Feb. 2022)

TAX BRACKET	TAXABLE INCOME (R)	RATES OF TAX (R)
1	1 – 216 200	18% of taxable income
2	216 201 – 337 800	38 916 + 26% of taxable income above 216 200
3	337 801 – 467 500	70 532 + 31% of taxable income above 337 800
4	467 501 – 613 600	110 739 + 36% of taxable income above 467 500
5	613 601 – 782 200	163 335 + 39% of taxable income above 613 600
6	782 201 – 1 656 600	229 089 + 41% of taxable income above 782 200
7	1 656 601 and above	587 593 + 45% of taxable income above 1 656 600

[Adapted from www.sars.gov.za]

TABLE 5 below shows the tax rebates for the 2021/2022 tax year.

TABLE 5: TAX REBATES FOR THE 2021/2022 TAX YEAR

TAX REBATE	
Primary	R15 714
Secondary (65 and older)	R8 613
Tertiary (75 and older)	R2 871

[Adapted from www.sars.gov.za]

Use TABLE 4 and TABLE 5 above to answer the questions that follow.

2.3.1 Explain the term 'gross income' in this context. (2)

2.3.2 Show by calculation that a person who was 75 years and older, and earned R151 100 during the 2022 tax year, paid no tax. (5)

2.3.3 Calculate Ms Nande's annual tax payable. (8)

[27]

2.3.1	Gross income is the amount of her salary (income) before deductions are made. ✓✓O	2O correct explanation (2)	F L1 M
2.3.2	$\text{Tax} = \frac{18}{100} \times 151\,100 \quad \checkmark M \rightarrow \text{tax bracket 1}$ $= R27\,198 \quad \checkmark S$ <p>Rebates (for 75 years or older)</p> $= R15\,714 + R8\,613 + R2\,871 \rightarrow \text{all 3 rebates are given}$ $= R27\,198 \quad \checkmark S$ <p>Actual tax = Tax – Rebates</p> $= R27\,198 - R27\,198 \quad \checkmark M$ $= R0 \text{ (no tax to pay)} \quad \checkmark A$	<p>1M 18% of 151 100</p> <p>1S simplification</p> <p>1S adding all the rebates</p> <p>1M subtracting rebates from tax payable</p> <p>1A answer (5)</p>	F L2 M

→ We know this before we work out annual income

2.3.3	<p>Annual Income (Gross) = $R39\,486 \times 12 \rightarrow \text{months}$</p> $= R473\,832 \quad \checkmark M$ <p>Annual Pension = $R473\,832 \times 7,5\% \quad \checkmark M$</p> $= R35\,537,40 \quad \checkmark CA$ <p>Taxable income = $R473\,832 - R35\,537,40$</p> $= R438\,294,60 \quad \checkmark A$ <p>Tax bracket 3: R337 801 – R467 500</p> <p>Tax = $70\,532 + 31\% \text{ of taxable income above } R337\,800$</p> $= 70\,532 + \frac{31}{100} \times (438\,294,60 - 337\,800) \quad \checkmark SF$ $= 70\,532 + \frac{31}{100} \times 100\,494,60$ $= 70\,532 + 31\,153,33 \quad \checkmark S$ $= R101\,685,33 \quad \checkmark CA$ <p>Annual Tax payable = $R101\,685,33 - \text{Primary rebate}$</p> $= R101\,685,33 - R15\,714$ $= R85\,971,33 \quad \checkmark MCA$	<p>1M gross annual income</p> <p>1M for 7,5% of gross annual income)</p> <p>1CA annual pension</p> <p>1A taxable income</p> <p>1SF substitution in tax bracket 3</p> <p>1S simplification</p> <p>1CA tax before rebate</p> <p>1MCA simplification: tax after subtracting rebate</p> <p>(8)</p>	F L4 D
-------	---	--	--------------

pension is a deduction (exempt of tax)

→ gross - pension

taxable income

upper boundary of tax bracket 2

under 65 years

(previous tax bracket)

- end -