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:

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 ↘ 7.5% of gross income
 ↳ UIF contribution
 ↓1% of income ← (which is greater)

4 Calculate taxible 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)
 ⓐ under 65
 ⓑ over 65] goes according to age
 ⓒ over 75
 (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
 ⓐ main member → person paying tax
 ⓑ 1st dependent → spouse/child
 ⓒ 2nd dependent → child/second child/ and so on

employed people over 65 receive both primary & secondary rebate. and over 75 receive all 3

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	550 601–708 310	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.
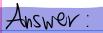
Use TABLE 1 to answer the questions that follow.

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:

Q/V	Solution/Oplossing	Explanation/Verduideliking	T&L
2.2.1	South African Revenue Services/SARS Revenue Services ✓✓A *Suid Afrikaanse Inkomstedienste/SAID* *Inkomste(belasting)dienste*	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	Annual tax before rebates/ *Jaarlikse inkomstebelasting voor belastingkortings* = 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 ↘ taxable income ↘ upper boundary of tax bracket 1 (previous tax bracket) Monthly tax before rebates/ *Maandelikse inkomstebelasting voor belastingkortings* = R63 677,35 ÷ 12 ✓MCA → 12 months. = R5 306,45 ✓CA **OR/OF** Annual tax before rebates/ *Jaarlikse inkomstebelasting voor belastingkortings* = 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 Monthly tax before rebates/ *Maandelikse inkomstebelasting voor belastingkortings* = R1 504 982,98 ÷ 12 ✓MCA = R125 415,25 ✓CA	CA from question 2.2.2 1SF correct substitution 1M adding correct amounts 1CA simplification 1MCA dividing by 12 1CA simplification **NPR** (5)	F L3
2.2.4(a)	✓✓RT → under 65 yrs old Primary rebate/*Primêre korting* **OR/OF** R14 067,00	2RT reading from the table (2)	F L1
2.2.4(b)	3/THREE/*DRIE* ✓✓A Primary + secondary + tertiary	2A correct number of rebates (2)	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	Tax Bracket 4/*Belastinghakkie 4* ✓✓A **OR/*OF*** Tax Bracket/*Belastinghakkie* R423 301 – R555 600 ✓✓A **OR/*OF*** 100 263 + 36% of taxable income above 423 300 ✓✓A	2A correct tax bracket (2)	F L2
5.1.2	Annual tax/*Jaarlikse belasting* R423 301 – R555 600 100 263 + 36% of taxable income above 423 300 R100 263 + 36% (R551 762 – R423 300) ✓SF R100 263 + (36% × R128 462) ✓CA R100 263 + R46 246,32 = R146 509,32 ✓CA Tax payable/*Belasting betaalbaar* = R146 509,32 – R14 220 ✓MCA = R132 289,32 ✓CA	**CA from Question 5.1.1** 1SF substitution 1CA simplification 1CA tax before rebate 1MCA subtracting rebate 1CA simplification (5)	F L3

Handwritten annotations:
— → tax bracket 4
→ income (gross)
upper boundary of tax bracket 3 (previous tax bracket)
→ under 65 / primary rebate only

.

Q/V	Solution/*Oplossing*	Explanation/*Verduideliking*	T&L

5.1.3	Present monthly tax payable
	=R132 289,32 ÷ 12 ✓MA
	= R11 024,11
	~~12months~~
	
	Annual tax payable one year older
	R132 289,32 – R7 794 ✓A
	= R124 495,32 ✓MA *→ add a secondary rebate 65yrs old*
	
	Monthly tax payable one year older
	R124 495,32 ÷ 12
	= R10 374,61 ✓CA
	
	Monthly tax savings *→ 64yrs – 65yrs*
	R11 024,11 - R10 374,61
	= R649,50 ✓CA
	
	His statement is CORRECT/*Sy bewering is KORREK* ✓O
	
	OR/*OF*
	✓RT
	R132 289,32 – R124 495,32
	= R7 794 ✓✓A
	
	R7 794 ÷ 12 ✓MA
	
	= R649,50 ✓CA
	
	His statement is CORRECT/*Sy bewering is KORREK.* ✓O
		CA from Question 5.1.2
		
		1MA dividing by 12 and
		   simplify
		
		1A correct rebate – R7 794
		1MA subtracting rebate and
		   simplification
		
		1CA simplification
		
		1CA simplification
		
		1O conclusion
		
		OR/*OF*
		1RT correct values
		2A correct rebate – R7 794
		
		1MA dividing by 12
		
		1CA simplification
		
		1O conclusion *alternative method*
			F
			L4
			*

Q/V	Solution/*Oplossing*	Explanation/*Verduideliking*	T&L
5.1.3	**OR/*OF*** Annual tax payable one year older/*Jaarlikse belasting betaalbaar een jaar ouer* = R146 509,32 - R14 220 - R7 794 ✓MA = R124 495,32 ✓A Annual tax payable/*Jaarlikse belasting betaalbaar* = R132 289,32 Monthly tax savings/*Maandelikse belasting besparing* $= \dfrac{\text{R132 289,32 - R124 495,32}}{12}$ ✓M ✓MA = R649,50 ✓CA His statement is CORRECT/*Sy bewering is KORREK.* ✓O	**OR/*OF*** 1MA subtracting rebate and simplification 1A correct tax payable 1M simplification 1MA dividing by 12 1CA simplification 1O conclusion (6)	*(handwritten: 2nd alternative method)*
5.1.4	Medical credits/*Mediese krediete:* ✓RT R310 + R310 + (R209 × 2) ✓MA R310 + R310 + R418 ✓MA = R1 038 ✓CA	*(handwritten: taken from table 7 above)* 1RT correct values 1MA multiplying with 2 1MA adding all the values 1CA simplification **AO** (4)	F L3

(handwritten annotations: "tax payer", "1st dependent", "2nd & 3rd dependent")

WORKED EXAMPLE ③
MATH LIT P1 NOV 2022 DBE

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]

Answer:

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	Tax $= \dfrac{18}{100} \times 151\,100$ ✓M *→ tax bracket 1* $= R27\,198$ ✓S Rebates (for 75 years or older) $= R15\,714 + R8\,613 + R2\,871$ *→ all 3 rebates are given* $= R27\,198$ ✓S Actual tax $=$ Tax $-$ Rebates $= R27\,198 - R27\,198$ ✓M $= R0$ (no tax to pay) ✓A *→ we know this before we work out annual income*	1M 18% of 151 100 1S simplification 1S adding all the rebates 1M subtracting rebates from tax payable 1A answer (5)	F L2 M
2.3.3	Annual Income (Gross) $= R39\,486 \times 12$ *→ months* $\qquad = R473\,832$ ✓M Annual Pension $= R473\,832 \times 7,5\%$ ✓M $\qquad = R35\,537,40$ ✓CA *pension is a deduction (exempt of tax)* Taxable income $= R473\,832 - R35\,537,40$ $\qquad = R438\,294,60$ ✓A *→ gross − pension* **Tax brackect 3: R337 801 – R467 500** Tax $= 70\,532 + 31\%$ of taxable income above R337 800 $= 70\,532 + \dfrac{31}{100} \times (438\,294,60 - 337\,800)$ ✓SF $= 70\,532 + \dfrac{31}{100} \times 100\,494,60$ *taxable income* ↗ *upper boundary of tax bracket 2 → (previous tax bracket)* $= 70\,532 + 31\,153,33$ ✓S $= R101\,685,33$ ✓CA Annual Tax payable $= R101\,685,33 -$ Primary rebate $\qquad = R101\,685,33 - R15\,714$ $\qquad = R85\,971,33$ ✓MCA	1M gross annual income 1M for 7,5% of gross annual income) 1CA annual pension 1A taxable income 1SF substitution in tax bracket 3 1S simplification 1CA tax before rebate 1MCA simplification: tax after subtracting rebate *under 65 years* (8)	F L4 D

— end —