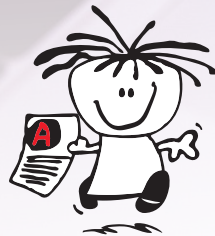# MATHS LITERACY
TEACHER SUPPORT WORKSHOP

FINANCE - Tips & Tricks

CLASSROOM RESOURCES

THE **ANSWER** SERIES

Your Key to Exam Success

Vodacom Tax Invoice

L9243867-2
OLIVER MICHAELS
407 MONTFRERE
1 CLAIR STREET
WESTDENE
BLOEMFONTEIN
65233

Tax invoice

Account number:	L9243867-2
Date:	03/07/2019
Your VAT registration number:	

All data Contract customers on any data bundle will qualify for additional data to be used between midnight and 5am, e.g. if you have a MyMeg 250, you will get another 250MB of Night Owl. This offer excludes Top Up and Prepaid customers. T&Cs apply.

Account summary:

Date	Description	Item number	Reference	Amount	Total
04/06/2019	Balance Brought Forward			99.00	99.00
02/07/2019	Payment	SCZ1399863	159019663	-99.00	0.00
03/07/2019	Invoice	B227108833	726371238	99.00	99.00

Invoice summary:

Cellular number:	0731456720
Invoice number:	B227108838
Due date:	31/07/2019

Description		Amount	VAT	Total
Subscription Services				
Data Promotion - Top Lip MyGig1	July			99.00
HSDPA Voice Tariff	July	0.00	0.00	0.00
VAS - Balance Notification	July	5.70	0.86	6.56
VAS - Free Balance Notification	July	-5.70	-0.86	-6.56
Total Subscription Services				**99.00**
Subtotal				**99.00**
This invoice amount				**99.00**

> > > 9 2060 1903 149 721 9

Invoice Total   99.00

Page 1 of 1

Your bank account will be debited with the full outstanding balance as reflected on this statement on the 1 August 2019.
Vodacom (Pty) Ltd. Registered office PO Box 3306 Cramerview 2060 Company Registration No. 1993/003367/07. VAT Registration No. 4010139121

Class Discussion & Exercise

Study the Vodacom statement & answer the questions:

1. How many days does Oliver have to pay his account, from the date of the statement until the due date?

2. What is another word for "Balance Brought Forward"?

3. What does the negative represent in the amount of "-99" on the 02/07/2019?

4. Calculate the VAT exclusive amount on the "Data Promotion – Top Lip MyGig 1" subscription service.

5. Determine the VAT paid on the "Data Promotion – Top Lip MyGig 1" subscription service.

Exam Practice

Adapted from DBE NSC Nov 2019 – Paper 1 – Q 2.1 – Annexure A

EXTRACT FROM MR DANIELS' MONTHLY MUNICIPAL STATEMENT

Mr KJ Daniels	Date:	2019/03/12
14 Sirkoon Street	Statement for:	March 2019
Kruger Park		
2738		

STAND SIZE	NUMBER OF DWELLINGS	DATE OF VALUATION	PORTION	MUNICIPAL VALUATION	REGION
1 215 m²	1	2018/07/01	R1	Market value R1 258 000	WARD C

ACCOUNT NUMBER: 345 678 8900 60

		SUBTOTAL (R)	TOTAL AMOUNT (R)
Water and sewer			
Reading period	2019/01/16 to 2019/02/12		
Meter reading Reading in litres. 1 000 litres = 1 kilolitre	Start: 795 000 End: 812 000		
Water usage	**A** kℓ (kilolitres)		
Daily average consumption	**B** kℓ		
Charges for ... kℓ are based on a sliding scale for a 28-day period			
Total water charge (excluding VAT)		**D**	
Water demand management levy		22,64	
Monthly sewer charge based on stand size (excluding VAT)		**C**	
VAT: 15%		**E**	

PAYMENT DUE	XXX
DUE DATE	2019/03/27

STEPPED RESIDENTIAL WATER TARIFF	
KILOLITRES PER CONNECTION PER MONTH	2018/19 TARIFF (R/kℓ) EXCLUDING
from 0 to 6	8,28
above 6 to 10	8,79
above 10 to 15	15,00
above 15 to 20	21,83

SEWER MONTHLY CHARGE BASED ON STAND SIZE	
STAND SIZE (m²)	2018/19 TOTAL CHARGE (IN RAND) EXCLUDING 15% VAT
Up to and including 300 m²	194,67
Larger than 300 m² to 1 000 m²	378,95
Larger than 1 000 m² to 2 000 m²	573,29
Larger than 2 000 m²	836,02

[Adapted from www.joburawater.co.za and www.jotariffs.co.za]

Use the information from the Municipal Statement provided to answer the questions:

1. Write down the market value in words.

2. Calculate **A**, the water usage.

3. Calculate **B**, the daily average consumption, based on a sliding scale for a 28-day period. Round off your answer to 2 decimal places.

4. Determine the value of **C**, the monthly sewer charge based on stand size (excluding VAT).

5. Use the stepped residential water tariff table to calculate the value of **D**, the total water charge (excl. VAT).

6. Calculate **E**, the total VAT on the total water charge and the monthly sewer charge.

Exam Practice Answers

1. One million, two hundred and fifty-eight thousand

2. Water usage = 812 000 – 795 000 = 17 000 litres

   A = 17 000 ℓ ÷ 1 000 = 17 kℓ

3. Daily average water consumption (**B**) = 17 kℓ ÷ 28 days = 0,61 kℓ/day

4. Monthly sewer charge excluding VAT (**C**) = R573,29

Kilolitres per connection per month	2018/19 Tariff (R/kl) (excl. 15% VAT)	❶ Range of each step	❷ Cumulative / running totals	❸ Cost per step
from 0 to 6	8,28	6 – 0 = 6 kℓ	6 kℓ	6 kℓ × R8,28 = R49,68
above 6 to 10	8,79	10 – 6 = 4 kℓ	6 + 4 = 10 kℓ	4 kℓ × R8,79 = R35,16
above 10 to 15	15,00	15 – 10 = 5 kℓ	10 + 5 = 15 kℓ	5 kℓ × R15,00 = R75,00
above 15 to 20	21,83	20 – 15 = 5 kℓ	15 + 2 = 17 kℓ	2 kℓ × R21,83 = R43,66

5. Total water charge (**D**) = R49,68 + R35,16 + R75,00 + R43,66 = R203,50

6. Total water charge (D) + Monthly sewer charge (C) = R203,50 + R573,29 = R776,79

   ∴ Total VAT (**E**) = $\frac{15}{100}$ × R776,79 = R116,52

Class Exercise or Quiz

Back to Basics!

Fill in the missing words:

1. Selling price = ... + profit

2. Profit = ... – cost price

3. Cost price = ... – profit

4. .... = income – expenses

5. .... = profit + cost price

6. .... = selling price – profit

7. .... = expenses + profit

8. .... = selling price – cost price

9. Selling price = profit + ...

10. Cost price = Selling price – ....
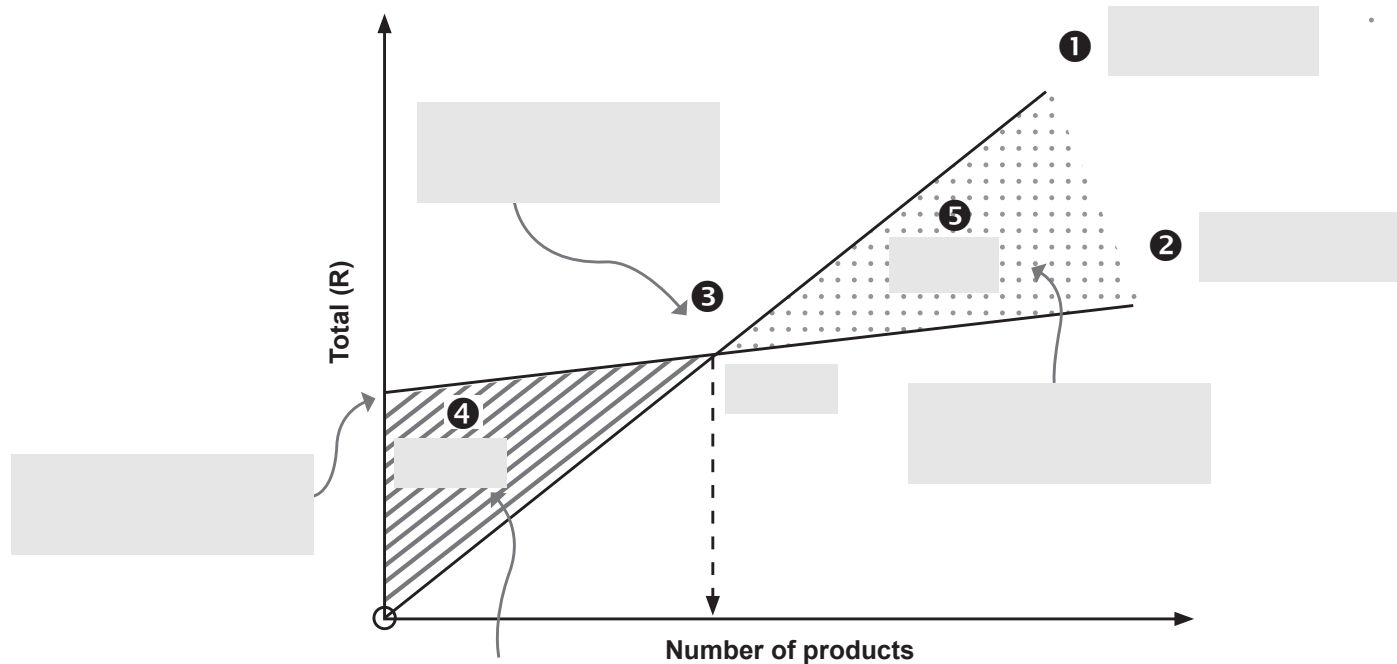
Worksheet

Provide labels, formulae and descriptions to explain the graph.

TYPICAL BREAK-EVEN GRAPH

Integrated Exam Question

DBE NSC – May/June 2019 – Paper 1 – Question 2

2.1   Susan intends selling cups of Milo at the local taxi rank for extra money. Milo is a nutritious supplementary drink developed to provide active people with key vitamins and minerals.

ANNEXURE B shows the advertisement from her local store where she intends to buy her stock.

PRICES AT A LOCAL STORE

	MILO OPTION 1 R97,95 per unit 1 unit = 1 kg		**PLASTIC SPOONS** R12,75 for 50 plastic spoons
	MILO OPTION 2 R1 140,95 for 12 units = 1 kg		**SUGAR** R32,20 per unit 1 unit = 2,5 kg
	FOAM CUPS R1,78 for 1 foam cup		**MILK** R11,99 per unit 1 unit = 1 ℓ

[Adapted from www.makro.co.za]

Approach

>> Extract information

– use coloured pens

>> Meaning of 'per unit'

>> Note number of items in a packet

>> Measurement units & conversions

– kilograms

– litres

BREAK-EVEN & PRICING

Integrated Exam Question continued ...

DBE NSC - May/June 2019 - Paper 1 - Question 2

2.1 Susan intends selling cups of Milo at the local taxi rank for extra money. Milo is a nutritious supplementary drink developed to provide active people with key vitamins and minerals.

ANNEXURE B shows the advertisement from her local store where she intends to buy her stock.

Use ANNEXURE B to answer the questions that follow.

2.1.1 Determine the unit price when purchasing Milo option 2. (3)

2.1.2 Determine the total cost of 6 ℓ of milk. (2)

2.1.3 Explain the meaning of the word *cost price*. (2)

2.1.4 Susan decided to exclude the cost of water when calculating the cost price per cup of Milo.

TABLE 1 below shows how Susan calculated the cost price of ONE cup of Milo.

TABLE 1: COST PRICE OF ONE CUP OF MILO

QUANTITY BOUGHT	COST OF INGREDIENTS	AMOUNT USED FOR ONE CUP	COST PER CUP OF MILO
1 kg Milo	R97,95	0,04 kg	A
1 ℓ milk	R11,99	B	R1,20
2,5 kg sugar	R33,20	0,01 kg	R0,13
25 foam cups	C	ONE	R1,78
50 spoons	R12,75	ONE	R0,26
TOTAL COST			D

(a) Calculate **A**, the cost of Milo per cup. (2)

(b) Determine **B**, the amount of milk, in litres, used for ONE cup of Milo. (2)

(c) Write down the value of **C**, the cost of 25 foam cups. (2)

(d) Show that the cost of ONE cup of Milo, **D**, is R7,29. (2)

2.15. Determine the selling price of ONE cup of Milo if Susan's intended profit margin is 25%. (4)

> Unit price ... divide by no. in packet

> Cost price .... terminology

> Rates .... same concept as tariffs i.e. Total cost = rate × no. of units

> Profit margin ... understanding Q & applying percentages

QUESTION 2 [40 MARKS]	
Q	**Solution**
2.1.1	$\frac{\text{R1 140,95}}{12}$ ✔ = R95,07916667 ✔ = R95,08 per kg ✔
2.1.2	= R11,99 × 6 ✔ = R71,94 ✔
2.1.3	Cost price of an item is the cost of making that item.
2.1.4 (a)	A – Cost of milo per cup R97,05 × 0,04 kg ✔ = R3,92 ✔
2.1.4 (b)	B – Amount of milk used $\frac{\text{R1,20}}{\text{R11,99}}$ ✔ = 0,1 ℓ ✔
2.1.4 (c)	C – cost of 25 foam cups R1,78 × 25 ✔ = R44,50 ✔
2.1.4 (d)	D – cost of one cup of milo ✔ ✔ R3,92 + R1,20 + R0,13 + R1,78 + R0,26 = R7,92
2.1.5	Profit = R7,29 × $\frac{25}{100}$ ✔ Selling price = R1,8225 + R7,29 ✔ Selling price = R9,1125 ✔ = R9,11 OR R9,10 ✔

Integrated Exam Question continued ...

DBE NSC - May/June 2019 - Paper 1 - Question 2

2.2 | Susan started her business one month later and because of the price increase of products, it then cost her R9,50 to make ONE cup of Milo. She calculated that the daily fixed cost was R90,00 and she woud be able to sell 100 cups of Milo per day. She will sell the Milo at R12,50 per cup.

Use the information above to answer the questions that follow.

2.1.1 TABLE 2 shows the income from the sale of cups of Milo.

TABLE 2: INCOME FROM THE SALE OF CUPS OF MILO

Number of cups of Milo (n)	0	20	30	40	80	100
Income in rand (R)	0	250	375	**P**	1 000	1 250

(a) Determine the value of **P** in TABLE 2 above. (2)

(b) Write down an equation that can be used to calculate the income. (2)

(c) Identify the independent variable in TABLE 2. (2)

2.2.2 Susan uses the following formula to determine the cost price of the cups of Milo:

Cost = R90,00 + R9,50 n where n = number of cups of Milo

TABLE 3 shows the cost price for a number of cups of Milo.

TABLE 3: COST PRICE OF A NUMBER OF CUPS OF MILO

Number of cups of Milo (n)	0	20	30	**Q**	80	100
Cost price in rand (R)	90	280	375	612,50	850	1 040

Calculate the value of Q in TABLE 3 above. (3)

2.2.3 The graph on ANSWER SHEET 1 shows the total income for making up to 100 cups of Milo. Use the information in TABLE 3 to draw another graph representing the cost from the selling of up to 100 cups of Milo. (3)

2.2.4 Use the tables or graphs on ANSWER SHEET 1 to answer the following questions.

(a) Explain the meaning of the word *break-even* in the context of the question. (2)

(b) Determine the number of cups of Milo at the break-even point. (2)

Annotations:

Highlight key info:
... cost R9,50 to make 1 cup
... daily fixed cost R90,00
... sell 100 cups per day
... sell at R12,50 per cup

P = income ...
    = selling price x no. of cups

Independent variable ...
basic skills terminology

Finding Q ...
reverse calculation

Check! Does my graph look like a typical break-even graph?

Break-even ... terminology

B/E point ... always *x*-axis

Solution Table:

Q	Solution
2.2.1 (a)	P = 40 × R12,50 ✔ = R500,00 ✔
2.2.2 (b)	Income in rand = R12,50 × number of cups of milo/n ✔✔
2.2.1 (c)	Number of cups of milo/n ✔✔
2.2.2	R612,50 = R90,00 + (R9,50 × n) R612,50– R90,00 = R9,50 × n ✔ $n = \dfrac{522,50}{9,50}$ ✔ Q = 55 ✔
2.2.3	 1A start of graph – cost price (0; 90) 1A end of graph – cost price (100; 1 040) 1A joining the points in a straight line graph
2.2.4 (a)	The cost price for the number of cups of Milo sold and the selling price of that number is the same (equal). No profit or loss ✔✔
2.2.4 (b)	30 cups ✔✔

Practice Question

Answers

5.1 The table below shows a summary of a small short-term loan scenario. The interest rate on this loan remains the same during the whole life of the loan.

End of Month	Interest	Balance Before Payment	Payment	Closing Balance After Payment
				R 1 000,00
July	R 90,00	R 1 090,00	R 225,00	R 865,00
Aug	R 77,85	R 942,85	R 225,00	R 717,85
Sept	R 64,61	R 782,46	R 225,00	R 557,46
Oct	R 50,17	R 607,63	R 225,00	R 382,63
Nov	R 34,44	R 417,06	R 225,00	R 192,06
Dec	R 17,29	R 209,35	R 209,35	R 0,00

5.1.1 What was the original loan amount?

5.1.2 Show that interest on this loan is being calculated at 9% per month.

5.1.3 Show how the Closing Balance After Payment value for October has been calculated.

5.1.4 Explain why the Payment value in December is different from every other month.

5.1.5 Calculate the real cost of this loan.

5.2 Now consider what would happen if the interest rate changed from 9% to 10% in September and remained at 10% until the end of the loan period.

End of Month	Interest	Balance Before Payment	Payment	Closing Balance After Payment
				R 1 000
July	R 90,00	R 1 090,00	R 225,00	R 865,00
Aug	R 77,85	R 942,85	R 225,00	R 717,85
Sept	R 71,79	R 789,64	R 225,00	R 564,64

5.2.1 Show that interest in September is calculated at 10%.

5.2.2 Complete the table to include the months of October to January.

5.2.3 Calculate the real cost of this loan.

5.2.4 Explain the effect of a 1% increase in the interest rate on this loan.

5.1.1 R1 000,00

5.1.2 Interest rate $= \dfrac{R90,00}{R1\,000,00} \times 100\%$
$= 9\%$

5.1.3 Closing Balance after Payment
= balance before payment - payment
= R607,63 - R225,00
= R382,63

5.1.4 The outstanding balance in December is R209,35. So, to pay off the loan a payment of R209,35 and not R225,00 is necessary.

5.1.5 Real cost of the loan $=$ (R225,00 $\times$ 5) + R209,35
$=$ R1 125,00 + R209,35
$=$ R1 334,35

5.2.1 Interest rate $= \dfrac{R71,79}{R717,85} \times 100\% = 10\%$

5.2.2

End of month	Interest	Balance before payment	Payment	Closing balance after payment
				R1 000
July	R90,00	R1 090,00	R225,00	R865,00
Aug	R77,85	R942,85	R225,00	R717,85
Sept	R71,79	R789,64	R225,00	R564,64
Oct	R56,46	R621,10	R225,00	R396,10
Nov	R39,61	R435,71	R225,00	R210,71
Dec	R21,07	R231,78	R225,00	R6,78
Jan	R0,68	R7,46	R7,46	R0,00

5.2.3 Real cost of the loan $=$ (R225,00 $\times$ 6) + R7,46
$=$ R1 350,00 + R7,46
$=$ R1 357,46

5.2.4 A 1% increase in the interest rate will increase the total amount paid back for this small loan by R1 357,46 - R1 334,35 = R23,11 and will increase the amount of time taken to pay back the loan from 6 months to 7 months.

VAT
Summary

V.A.T.
Value **A**dded **T**ax
@ 15%
Paid to government

VAT-incl.
= VAT-excl. price × 115%
= VAT + VAT-excl. price

e.g. Calculate VAT-incl. price of milk if it costs R25,00 excl. VAT.

VAT-incl. price
= R25,00 × 115%
= R28,75 ... OR

VAT   = 15% × R25,00
        = R3,75

VAT-incl. price
= R3,75 + R25,00
= R28,75

VAT-Exempt (#)
No VAT charged on selected basic goods
e.g. fruit, veg, milk, rice

VAT
= 15% × VAT-excl. price

e.g. Calculate VAT on milk if it costs R25,00 excl. VAT.

VAT   = 15% × R25,00
        = R3,75

VAT-excl.
= VAT-incl. price ÷ 115%

e.g. Calculate VAT-excl. price of milk if it costs R28,75 incl. VAT.

VAT-excl. price
= R28,75 ÷ 115%
= R25,00

Worksheet

Masstores (Pty) Ltd T/A MAKRO SA
Corner Okovango & Belami Rds,Brackenfell,Cape Town,
Company Reg No: 1991/006805/07
VAT Reg No :   4300119155

makro
Save money. Live better.

NLA Reg No :	RG0000488	Reprint Date :	Thu 09/09/2021
Registered Status :	Distributor	Reprint Time :	03:05
Liquor Store Lic :	WCP/039664	Reprint Store :	M19 Makro Cape Gate
Grocers Wine Lic :	WCP/039662	Page :	1 of 1

COPY TAX INVOICE

	POS No : 31
	Invoice No : 29
	Sales Date : Wed 08/09/2021
VAT Reg No : NOT APPLICABLE	Sales Str : M19 Makro Cape Gate
	Cashier ID : 196
ZA	Unique Ref : 03102901908092021
	Cust. Ref :
	Order ID :
	Orig Inv Rf :

QTY	UNIT/PK		WEIGHT (Kg)					
BARCODE	DESCRIPTION	DIS	SGL INC	PK INC	VAT CD	TOTAL EXC	TOTAL INC
2	1						
06009617223714	LANCEWOOD CHEESE 900G, WHITE	80	97.50	97.50	2		195.00
2	1						
06001299695186	CLOVER FETA CHEESE 400G, HERB	80			2		90.00
1	1						
06007191000158	PACKHAM PEARS 1.5KG		27.95	27.95	0		27.95
1	1						
06009702963761	GUAVA PP		17.95	17.95	0		17.95
1	1						
06009702964072	LEMONS 1KG		12.95	12.95	0		12.95
1	1						
06001505594074	MAKRO CHECKOUT VTC BAGS 24LT		1.04	1.04	2		1.04

TOTALS

8 ARTICLES ON THIS INVOICE

VAT SUMMARY

Vat Code	Vat %	Goods Amount	Vat Amount
0	0.00		
2	15.00		

Study the Makro invoice alongside (some information has been deleted) and answer the following questions:

1. Determine the price (incl. VAT) of one tub of Clover Feta Cheese.

2. Calculate the price (excl. VAT) of one Lancewood Cheese block.

3. Determine the total VAT charged on this Makro invoice.

Answers

1. Price of one Clover Feta Cheese

    = R90,00 ÷ 2

    = R45,00 incl. VAT

2. Price of one Lancewood Cheese = R97,50 incl. VAT

    Price excl. VAT = R97,50 ÷ 115%

    = R84,78

3. Total of VAT-able goods

    = R195 + R90 + R1,04 = R286,04 incl. VAT
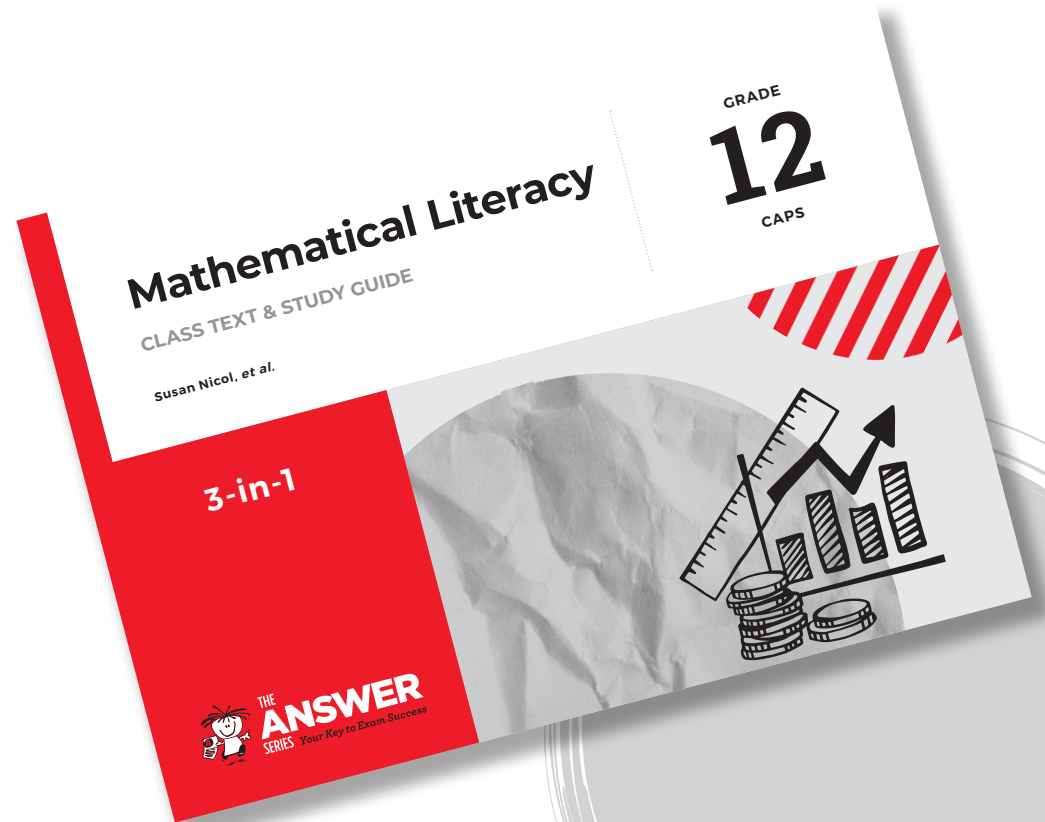
    Total of VAT-able goods excl. VAT

    = R286,04 ÷ 115%

    = R248,73

    ∴ VAT = VAT-incl. total – VAT-excl. total

    = R286,04 – R248,73

    = R37,31

GRADE

12

CAPS

Mathematical Literacy

CLASS TEXT & STUDY GUIDE

Susan Nicol, *et al.*

3-in-1

THE **ANSWER**
SERIES *Your Key to Exam Success*

Summary

1 Taxable Income

= Gross income – Non-taxable

Deductions (e.g. RA, pension)

ANNUAL! $\times$ 12 months

2 Tax Bracket

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]

4 Income Tax

= Rate of tax – Rebates

TAX BRACKET	
Primary	R14 220
Secondary (65 and older)	R7 794
Tertiary (75 years and older)	R2 601

MONTHLY! ÷ 12 months

3 Rate of Tax

e.g.Taxable income = R370 000

Tax bracket 3:

63 853 + 31% of taxable income above 305 850

Rate of tax

= R63 853 + 31% of (R370 000 – R305 850)

= R63 853 + 31% $\times$ R64 150

= R63 853 + R19 886,50

= R83 739,50 per annum

Work backwards!

5 Net Income

= Gross MONTHLY income –
total MONTHLY deductions
(e.g. income tax, medical aid, UIF)

Class Exercise

7.1 The table below shows the income tax brackets for the 2016/2017 financial year.
(Source: South African Revenue Service, 2016 Budget Tax Guide, p.2)

Income Tax Brackets 2008/2009

Income Tax for Individuals

Tax Bracket	Taxable Income (R)	Rates of Tax (R)
1	0 - 188 000	18% of each R1
2	188 001 - 293 600	33 840 + 26% of the amount above 188 000
3	293 601 - 406 400	61 296 + 31% of the amount above 293 600
4	406 401 - 550 100	96 264 + 36% of the amount above 406 400
5	550 101 - 701 300	147 996 + 39% of the amount above 550 100
6	701 301 and above	206 964 + 41% of the amount above 701 300

Tax Rebates

Rebates	R
Primary	13 500
Secondary (Persons 65 and older)	7 407

Tax Threshold

Age	Tax Threshold (R)
Below age 65	75 000
Age 65 and over	116 150

7.2 Solly is a 28 year-old who earns R15 090 per month.

7.2.1 Use the tax table for 2016/2017 above to calculate Solly's monthly income tax contribution.

7.2.2 If Solly is given a 13th cheque at the end of every year, how will this affect the total amount of tax that he has to pay on his salary?

7.2.3 If Solly is given an 8% increase on his gross salary, how much of the increase will he actually receive after tax every month?

(For this question, ignore the 13th cheque and work with 12 salaries for the year.)

Answers

7.1.2 R17 100,00 per month $= 17\ 100 \times 12$ months
$= $ R205 200,00 per year
$= $ Tax bracket 2

7.1.3 Primary rebate of R13 500,00

7.1.4 65 years and older

7.2.1 Annual income $= $ R15 090 $\times$ 12
$= $ R181 080

$\therefore$ Annual tax $= \frac{18}{100} \times$ R181 080 (tax bracket 1)
$= $ R32 594,40

$\therefore$ Actual tax $= $ R32 594,40 - R13 500
$= $ R19 094,40

$\therefore$ Monthly tax $= $ R19 094,40 $\div$ 12
$= $ R1 591,20

7.2.2 Annual income with 13th cheque
$= $ R181 080,00 + R15 090,00
$= $ R196 170,00 (tax bracket 2)

Yearly tax
$= $ R33 840,00 + 25% $\times$ (R196 170,00 - R188 000,00)
$= $ R33 840,00 + 25% $\times$ R8 170,00
$= $ R33 840,00 + R2 042,50
$= $ R35 882,50

Actual tax payable per year
$= $ R35 882,50 - R13 500,00 (primary rebate)
$= $ R22 382,50

So, receiving a 13th cheque will mean that Solly will pay R22 382,50 - R19 094,40 = R3 288,10 more tax during the year.

7.2.3 Old salary $= $ R15 090,00 per month

New salary $= $ R15 090,00 + 8% $\times$ R15 090,00
$= $ R15 090,00 + R1 207,20
$= $ R16 297,20

New annual salary $= $ R160 297,20 $\times$ 12
$= $ R195 566,40 (tax bracket 2)

Yearly tax
$= $ R33 840,00 + 26% $\times$ (R195 566,40 - R188 000,00)
$= $ R33 840,00 + 26% $\times$ R7 566,40
$= $ R33 840,00 + R1 967,26
$= $ R35 807,26

Actual tax payable per year
$= $ R35 807,26 - R13 500,00 (primary rebate)
$= $ R22 307,26
$= $ R1 858,94 per month

So, increase in salary of R1 207,20 (8%) brings about an increase in tax of R1 858,94 - R1 591,20 (monthly tax on original salary) = R267,74.

So, the amount of the increase in salary that Solly will actually take home is R939,46.

Exam Practice

DBE NSC - Feb/Mar 2017 - Paper 2 - Question 3

Jumanda's three friends from Angola will visit him in Upington. They plan to stay at a resort that charges R850 per unit per day for accomodation.

The following exchange rates may be used:

- Kz100 000 = R9 173,05 and
- $1 = Kz 169,27344   [Source: Coinmill.com, 2 June 2016]

Use the information above to answer the questions that follow.

3.3.1 Determine (in Kz) the equal amount that EACH of the friends must contribute towards the accomodation per day. (5)

3.3.2 The average monthly disposable salary (ADMS) in Angola is $1 760,41 and in South Africa it is R16 500.

The average montly rental cost for an apartment in Angola is Kz145 990, whereas a similar apartment in South Africa costs R4 430 per month.

One of the friends stated, 'The average rental cost of an apartment in Angola, expressed as a perentage of the AMDS, is double the percentage of a similar apartment in South Africa.

Verify, showing ALL calculations, whether this statement is valid. (7)

Answers

3.3.1	Accomodation per person $= \frac{R850}{3}$ ✓ $= R283,33$ ✓ Kz100 000 = R9 173,05 Amount Kwanza $= \frac{R283,33}{R9\,173,05} \times Kz100\,000$ ✓ ✓ $\approx Kz\,3\,088,76$ ✓ OR R9 173,05 = Kz100 000 $R1 = \frac{100\,000}{9\,173,05}$ ✓ $= Kz\,10,9014995$ $\therefore R850 = Kz\,10,9014995 \times 850$ ✓ $\approx Kz9\,266,27$ ✓ Cost per person $= \frac{9\,266,27}{3}$ ✓ $\approx Kz\,3\,088,76$ ✓
3.3.2	$1 = Kz 169,27344 ✓ Average disposable salary $= \$1\,760,41 \times Kz169,27344/\$$ $\approx Kz\,297\,990,66$ ✓ Angola: Rent as a % of income $= \frac{145\,990}{297\,990,66} \times 100\%$ ✓ $= 48,99\%$ ✓ South Africa Rent as a % of income $= \frac{4\,430}{16\,500} \times 100\%$ ✓ $= 26,85\%$ ✓ ✓ Not valid. It is much cheaper in SA but not double.