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GRADE 12

JUNE 2023

MATHEMATICAL LITERACY P1 MARKING GUIDELINE

MARKS: 100

Symbol	Explanation
M	Method
MA	Method with accuracy
CA	Consistent accuracy
A	Accuracy
C	Conversion
S	Simplification
RT	Reading from a table/graph/document/diagram
SF	Correct substitution in a formula
O	Opinion/Explanation
P	Penalty, e.g. for no units, incorrect rounding off, etc.
R	Rounding off
NPR	No penalty for correct rounding
AO	Answer only
MCA	Method with constant accuracy
RCA	Rounding consistent with accuracy

This marking guideline consist of 9 pages.

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.

QUESTION 1 [20 MARKS]			
Ques.	Solution	Explanation	T&L
1.1.1	$\frac{6,5}{100} \checkmark \text{MA}$ $= \frac{13}{200} \checkmark \text{A}$	1MA dividing 6,5 by 100 1A common fraction (2)	D L1 E
1.1.2	Learners who did not go = $200 \times 6,5\% \checkmark \text{MA}$ $= 13 \checkmark \text{A}$ Learners went = $200 - 13$ $= 187 \checkmark \text{A}$ <p style="text-align: center;">OR</p> $\% \text{ went} = 100\% - 6,5\%$ $= 93,5\% \checkmark \text{MA}$ Learners went = $200 \times 93,5\% \checkmark \text{A}$ $= 187 \checkmark \text{A}$	1MA multiply by 6,5% 1A learners who did not go 1A number of learners went 1MA % went 1M multiply by 93,5% 1A number went (3)	D L1 E
1.1.3	$187 : 200 \checkmark \text{RT} \checkmark \text{CA}$	1RT correct values in ratio form 1A simplified ratio form (2)	D L1 E
1.1.4	$6,5\% \checkmark \checkmark \text{A}$	2A correct percentage (2)	P L1 E

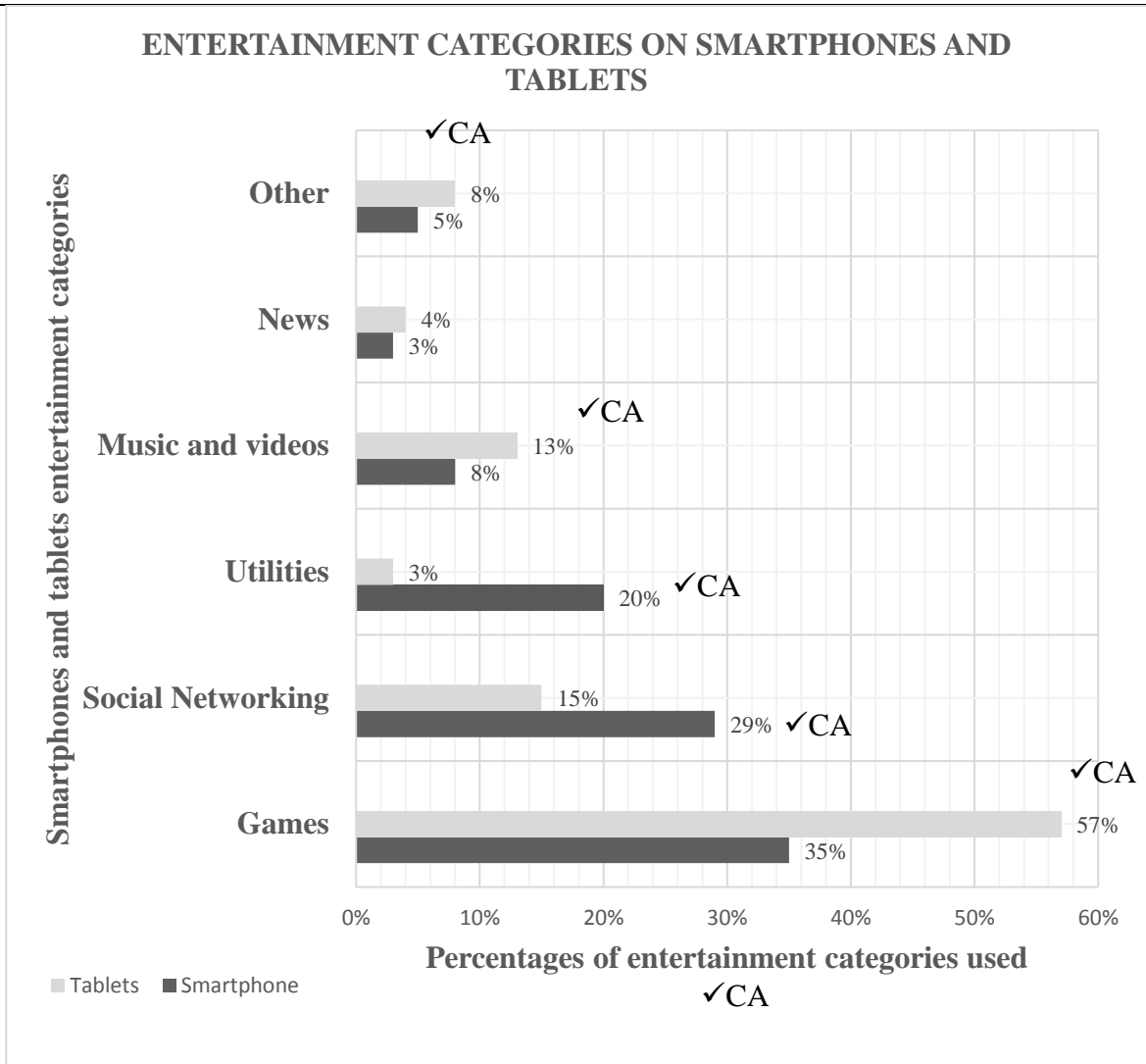
1.2.1	David = 25 ✓A Sam = 30 ✓A	1A 1st age 1A 2nd age (2)	F L1 M
1.2.2	DAVID $= \frac{30}{55} \times R409\,750$ ✓M = R223 500 ✓CA SAM $\frac{25}{55} \times R409\,750$ = R186 250 ✓CA	1M multiplying correct fraction 1CA Simplification answer 1CA Sam's answer (3)	F L1 M
1.3.1	VAT – Value Added Tax ✓✓A	2A explanation (2)	F L1 E
1.3.2	R0,00 ✓✓A	1RT correct values used 1CA answer (2)	F L1 E
1.3.3	Total amount = R38,99 × 15 ✓M = R584,85 ✓A	1M multiply by 15 1A total amount (2)	F L1 E
		[20]	

QUESTION 2 [31 MARKS]			
Ques.	Solution	Explanation	T&L
2.1.1	R17 000 ✓✓ RT	2 RT correct value (2)	F L1 E
2.1.2	R18 650 – R17 000 ✓M✓RT = R1 650 ✓CA	1RT correct values 1M subtracting correct values 1CA correct amount (3)	F L2 E
2.1.3	✓✓O When the accident occurs or the car get stolen then they can get their car fixed/replaced as soon as possible.	2O relevant reason (2)	F L4 M
2.1.4	✓SF Company A = 2 340,90 + 3 × (950 – 600) ✓M = R3 390,90 ✓CA Company B = R3 220,65 ✓RT Valid statement ✓O	1SF substitution 1M getting used km 1CA total interest 1RT company B amount 1O opinion (5)	F L4 M
2.1.5	The cars were in demand during 5th to 7th ✓✓A	2R acceptable reason (2)	F L4 M
2.2.1	South African Revenue Services ✓✓A	2A correct answer (2)	F L1
2.2.2	7 ✓✓RT	2RT correct value (2)	F L1 E
2.2.3	42 678 + 26% of (370 500 – 237 100) ✓SF = 42 678 + 26% of 133 400 ✓S = 42 678 + 33 046 ✓A = R77 362	1SF substitution 1S simplification 1A correct values (3)	F L3 D
2.2.4	✓✓RT Tax rebate is an amount of money by which SARS reduces the actual taxes owing, depending on age.	2A explanation (2)	F L1 E

2.2.5	<p>Taxable income = R34 447,22 × 7,5%</p> <p>= R2 583,54 ✓A</p> <p>= R34 447,22 – R2583,5415 ✓A</p> <p>= R31 863,6785 × 12 ✓A</p> <p>= R382 364,142</p> <p>= R77 362 + 31% (382 364,14 – 370 500) ✓SF</p> <p>= R77 362 + 31% (11 864,14)</p> <p>= R77 362 + R3 677,88</p> <p>= R81 039,88 – R16 425 ✓S</p> <p>= <u>R64 614,88</u> ✓M</p> <p>12</p> <p>= R5 384,57 – (347 × 2 + 234 × 2) ✓CA</p> <p>= R4 222,57</p> <p>Invalid ✓O</p>	<p>1A pension fund value</p> <p>1A subtracting pension fund</p> <p>1A multiply by 12</p> <p>1CA taxable annual income</p> <p>1SF substituting to the correct bracket</p> <p>1S subtracting rebate</p> <p>1M divide by 12</p> <p>1CA monthly tax contribution</p> <p>1O opinion</p> <p>(8)</p>	<p>F</p> <p>L4</p> <p>M</p>
		[31]	

QUESTION 3 [21 MARKS]			
Ques.	Solution	Explanation	T&L
3.1.1	June 2020 ✓RT	1RT month 1RT year (2)	D L1 E
3.1.2	1 097 000 1 000 000 ✓A	1RT correct value with '000' 1A nearest million (2)	D L2 M
3.1.3	$\text{Percentage change} = \frac{1\ 039\ 000 - 1\ 036\ 000}{1\ 036\ 000} \times 100\%$ $= 0,29\%$ $= 0,3\% \quad \checkmark\text{CA}$	$\checkmark\text{M}$ $\checkmark\text{SF}$ 1M difference 1SF substitution 1S simplification 1CA percentage (4)	D L3 M
3.1.4	No modal value ✓✓ A	2A correct answer (2)	D L2 M
3.1.5	Retirement age ✓✓ A Death	2A (2)	D L4 M
3.1.6	That shows that the values are negative. ✓✓R	2O correct reason (2)	D L4 M
3.2.1	$C = 100\% - (15\% + 3\% + 13\% + 4\% + 8\%) \checkmark$ $= 100\% - 43\% \checkmark$ $= 57\% \checkmark$	1M subtracting from 100% 1S simplification 1CA games percentage (3)	D L2 M

3.2.2



1A plotting Other (8%) value correctly
 1A plotting Music and videos (13%) value correctly
 1A plotting utilities value (20%) correctly
 1CA (from 3.2.2) plotting games value (57%) correctly

(4)

[21]

QUESTION 4 [28 MARKS]			
Ques.	Solution	Explanation	T&L
4.1.1	Pie chart OR ✓✓A Bar graph	2A type of graph (2)	D L1 E
4.1.2	Biomedical engineer ✓✓RT Surgeon	2A names of health-related jobs (2)	D L1 E
4.1.3	✓A $\frac{12}{20} \times 100$ ✓M 20 ✓A = 60% ✓CA	1A numerator and 1A denominator 1M multiply by 100 1CA correct percentage (4)	P L2 M
4.1.4	✓RT $106\,960 \times R18,42$ ✓RT = 1 970 203,20 ✓S = 2 000 000 ✓R	1RT correct value 1M multiply by R18,42 1S simplification 1R rounding (4)	F L3 M
4.2.1	✓RT $5309,21 \times 100$ ✓M = 530 921 cents ✓CA = Five Hundred and Thirty Thousand Nine Hundred and Twenty One cents. ✓CA	IRT correct value 1M multiply correct value by 100 1CA answer in cents 1CA answer in words (4)	F L1 E
4.2.2	Admin fee = $5\,309,21 - (4\,529,86 \times 1,15)$ ✓RT ✓M = 99,87 ✓CA Admin fee % = $\frac{99,87}{5\,309,21} \times 100$ ✓M = 1,88% ✓CA	2RT correct 1CA admin fee 1M divide correct values and multiply by 100 1CA admin fee percentage (5)	F L2 D
4.2.3	R5 309,21 ÷ 12 ✓M = R442,43 ✓S = R442 ✓CA	1M divide by 12 1CA correct monthly value 1CA monthly premium (3)	F L2 E

Ques.	Solution	Explanation	T&L
4.2.4	$= R4\,529,86 \times 15\%$ $= R679,48 \quad \checkmark CA$ $= R99,87 - (R99,87 \div 1,15)$ $= R13,03 \quad \checkmark CA$ VAT amount = $R679,48 + R13,03 \quad \checkmark CA$ $= R692,51 \quad \checkmark CA$ <p style="text-align: center;">OR</p> $R5\,309,21 \div 1,15 \quad \checkmark M$ $= R4\,616,70 \quad \checkmark CA$ VAT amount = $R5\,309,21 - R4\,616,70 \quad \checkmark M$ $= R692,51 \quad \checkmark CA$	1CA multiply by 15% 1CA subtotal VAT amount 1CA VAT on admin fees 1CA adding two VAT values 1CA total VAT amount 1M divide by 1,15% 1CA answer 1M subtracting correct values 1CA answer (4)	F L3 D
		[28]	
TOTAL: 100			