KWAZULU-NATAL PROVINCE

EDUCATION

REPUBLIC OF SOUTH AFRICA



MATHEMATICAL LITERACY

TEST 1

TERM 1 2021

TOPIC: NUMBER AND CALCULATIONS WITH NUMBERS

NATIONAL SENIOR CERTIFICATE

GRADE 10

MARKS: 30 **TIME: 1 HOUR**

NAME OF SCHOOL: _____

This question paper consists of 3 pages.

INSTRUCTIONS AND INFORMATION

1. This question paper consists of TWO questions. Answer ALL the questions.
2. Number the answers correctly according to the numbering system used in this question paper.
3. Start EACH question on a NEW page.
4. You may use an approved calculator (non-programmable and non-graphical), unless stated otherwise.
5. Show ALL calculations clearly.
6. Indicate units of measurement, where applicable.
7. Maps and diagrams are NOT necessarily drawn to scale, unless stated otherwise.
8. Write neatly and legibly.

norephysics.com

QUESTION 1

Mr Zulu is a teacher at Sizimele High School. He earns an annual income of R420 600.

1.1 Write down R 420 600 in words. (2)

1.2 When you write 420 600 in your calculator it sometimes comes out as 420,600. Explain the purpose of the comma. (2)

1.3 If he gets an increase of 8,2% next year, calculate his new annual salary. (3)

1.4 He will be paying 30% of his total annual salary next year to the South African Revenue Services (SARS) in income tax.

Stanmorephysics.com

1.4.1 Convert 30% to a decimal number. (2)

1.4.2 Calculate the amount of income tax he will be paying to SARS after his annual salary increase. (2)

1.4.3 If he pays 30% of his income to SARS as income tax, what percentage of his salary is left over? (2)

1.4.4 Calculate how much he will receive after tax deduction monthly? (4)

[17]

QUESTION 2

2

A 22-seater taxi uses petrol at an average of 12ℓ /100 km. This taxi was hired by 15 people for an outing and they paid R 4 500 in total.



2.1. Explain what 12ℓ /100km means. (2)

2.2 Approximately how much fuel will be required for a journey of 679 km? (Round off your answer to one decimal place) (3)

2.3 How many km could the taxi travel if it had 37ℓ of petrol in its tank? (Round off your answer to the nearest km). (3)

2.4 How much will each person pay for hiring the taxi? (2)

2.5 If another 6 people join them, how much will they each pay? (3)

[13]

Total: 30 marks

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MARKING GUIDELINE

TEST 1 TERM 1 2021

GRADE 10

MARKS: 30

Symbol	Explanation
M	Method
M/A	Method with Accuracy
CA	Consistent Accuracy
A	Accuracy (Answer)
C	Conversion
S	Simplification
RT / RG / RM	Reading from table / Reading from graph / Reading from map
F	Choosing the correct formula
SF	Substitution in formula
O	Opinion
P	Penalty e.g. for no units, incorrect rounding, etc
R	Rounding off / Reason
U	Unit
This marking guideline consists of 3 pages.	

QUESTION 1 [17 MARKS]			
No	**Solution**	**Explanation**	**T& L**
1.1	Four hundred twenty thousand and six hundred Rand ✓✓A	2A Amount in words (2)	L1
1.2	The comma is a "thousands separator" (just like the space in 420 600). It is not a decimal comma. ✓✓ E	2 E Explanation (2)	L1
1.3	$= (\frac{8.2}{100} \times 420\,600)$ ✓M + 420 600 = 34 489.20 + 420 600 ✓M = R455 089,20✓ CA	1M multiplying by 420600 1M adding 420600 1CA amount (3)	F L2
1.4.1	30% = $\frac{30}{100}$ ✓S = 0.3 ✓A	1S simplification 1A decimal (2)	F L1
1.4.2	$\frac{30}{100}$ X 455 089,20✓M = R 136 526.70 ✓CA	1M multiplying 455 089.20 from **1.3** 1CA answer (2)	F L2
1.4.3	100% - 30% ✓MA = 70 %✓A	1MA subtracting 1A correct percentage **AO** (2)	F L2
1.4.4	R455 089,20 - R 136 526.70 ✓ M = R 318 562.50 ✓M R 318 562.50 ÷ 12 ✓M = R26 546.88 ✓CA	1M Subtracting R136526.70 **from 1.4.2** 1M Amount 1M dividing by 12 1CA monthly salary (4)	F L3
			[17]

QUESTION 2 [13 MARKS]			
2.1.	12ℓ /100 km means 12 litres of fuel are used✓ for every 100 kilometres. ✓E	2 E Explanation (2)	M L1
2.2	12ℓ = 100 km ℓ = 679 km $\frac{100\ l}{100} = \frac{679\ \ x\ \ 12}{100}$ ✓S ℓ = 81.48 litres ✓CA ℓ = 81.5 litres ✓R	1S Simplification 1CA no. of litres 1R Rounding up (3)	M L2
2.3	12ℓ = 100 km 37 ℓ = km $\frac{12\ km}{12} = \frac{37\ \ x\ \ 100}{12}$ ✓S = 308.33 km✓CA = 308 km ✓R	1Simplification 1CA Kilometres 1R Rounding down (3)	M L2
2.4	4500 ÷ 15 ✓MA = R 300 ✓A	1MA dividing by 15 1A Amount (2)	L1
2.5	15 + 6 = 21✓ MA 4500 ÷ 21 ✓ M = R 214. 29 = R 214.30 ✓ A	1MA adding no. of people 1M dividing by 21 1A Answer (3)	L2
			[13]

TOTAL MARKS : 30