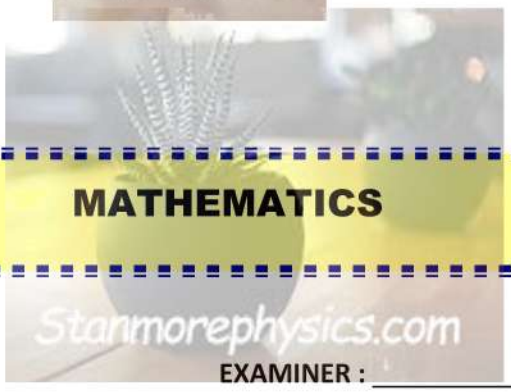
GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

ASSIGNMENT
TERM 1

GRADE 9



MATHEMATICS

MARKS: 50 **EXAMINER :** _____

TIME: 1 hour **MODERATOR:** _____

This question paper consists of 4 pages

Question 1

Are the following statements true or false? Write your answer in the space provided to you in the table.

1.	Natural numbers also include decimal numbers.	
2.	$5\times 6\times 0\times 2+5$ is equal to zero	
3.	$1+2\times 6+11\times 2=58$	
4.	A number divided by zero is undefined	
5.	5,95 as a percentage is 59, 5%	
6.	$5(6+7)=(5\times 6)+(5\times 7)$ is an example of the distributive law.	
7.	The square root of 64 added to two cubed is 18	
8	$35\% > \frac{7}{20}$	

[8]

Question 2

2.1 The sum of two numbers is 807 090.

If one number is 485 316, what is the other?

_____

_____

_____ (2)

2.2 Express 18 and 24 as products of their prime factors.

24 | 18

24 = _____ (1)

18 = _____ (1)

2.3 Arrange the following numbers in descending order: -10 ; 7^2; -5 ; 0×5

_____ (2)

2.4 Determine the HCF and LCM of 21 and 27

HCF of 21 and 27 =_____ (1)

LCM of 21 and 27 =_____ (1)

2.5 What is 5×10^{-4} written in standard notation? (1)

[9]

Question 3

Simplify: Show all your workings

3.1 $(\sqrt[3]{27})^3$ (2)

3.2 $\sqrt{16-9}$ (2)

3.4 $3^4 + (17)^0 - \sqrt{49}$ (3)

3.5 $(-1)^3 + 10^2 + 4 \times -5$ (3)

[10]

Question 4

4.1 Simplify the following without using a calculator:

(a) $2\frac{1}{4} \times \frac{2}{3}$ (2) (b) $\frac{3}{4} + 4\frac{1}{6} \div 5$ (3)

4.2 Tarra bought a fridge for R2 500 and sold it for R3 999. Calculate the percentage profit she made. (2)

4.3 Ivy bought the fridge for R3 999 and paid a deposit of 10%. How much was her deposit? (2)

4. 4 R5 000 is invested at 6 % simple interest per year for 4 years. Calculate what the investment is worth at the end of the 4 years. (3)

4.5 Grandparents of Zakhele gives her R15 000 for her 21st birthday. Calculate the compound interest earned over 2years at 12% p.a. interest. (4)

[14]

Question5

5.1 Give the value of x for each of these equivalent ratios

5.1.1 $3 : 8 \rightarrow x : 24$ (2)

5.1.2 $x : 77 \rightarrow 7 : 11$ (2)

5.2 Say whether each of these relationships is direct or indirect proportion:

5.2.1 The more alcohol you drink, the lower your driving ability. (1)

5.2.2 Ivan buys 5 sweets for R2, and 10 sweets for R4. (1)

5.3 If a calculator is sold for R120.00. What will the new price of a calculator be if the original selling price is **Increased in a ratio of 5 : 3** (3)

[9]

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MEMO FOR ASSIGNMENT

Question 1

Are the following statements true or false? Write your answer in the space provided to you in the table.

1.	Natural numbers also include decimal numbers.	FALSE	
2.	$5\times 6\times 0\times 2+5$ is equal to zero	FALSE	✓
3.	$1+2\times 6+11\times 2=58$	FALSE	✓
4.	A number divided by zero is undefined	TRUE	✓
5.	5,95 as a percentage is 59, 5%	FALSE	✓
6.	$5(6+7)=(5\times 6)+(5\times 7)$ is an example of the distributive law.	TRUE	✓
7.	The square root of 64 added to two cubed is 18	FALSE	✓
8	$35\% > \frac{7}{20}$	FALSE	✓

Question 2

2.1 The sum of two numbers is 807 090.

If one number is 485 316, what is the other?

$= 807\ 090 - 485\ 318$

$= 321\ 774$ (2)

2.2 Express 18 and 24 as products of their prime factors.

2	24
2	12
3	6
2	2
	1

2	18
3	9
3	3
3	1

$24 = \quad 2 \times 2 \times 2 \times 3$ (1)

$18 = \quad 3 \times 3 \times 3 \times 2$ (1)

2.3 Arrange the following numbers in descending order: -10 ; 7^2; -5 ; 0×5

$7^2; 0 \times 5; -5; -10$ (for every TWO values in correct order = 1 mark) (2)

2.4 Determine the HCF and LCM of 21 and 27.

HCF of 21 and 27 = 3 (1)

LCM of 21 and 27 = 3 (1)

2.5 0,0005 (1)

Question 3

3.1	27 ✓✓	2 marks for answer	(2)
3.2	$\sqrt{16+9}$ $= \sqrt{25}$ ✓ $= 5$ ✓	1 mark adding 1 mark for answer	(2)
3.3	$3^4 + (17)^0 - \sqrt{49}$ $= 81$ ✓ $+ 1 - 7$ ✓ $= 75$ ✓	2 marks for step 2 1 mark for answer	(3)
3.4	$(-1)^3 + 10^2 + 4X(-5)$ $= -1 + 100 - 20$ ✓ $= \frac{9}{4} \times \frac{2}{3}$ ✓ $= 79$ ✓	2 marks for method 1 mark for answer	(3)

Question 4

4.1 a	$2\frac{1}{4} \times \frac{2}{3}$		(2)

	$= \frac{3}{4} \times \frac{2}{1}$ $= \frac{3}{2}$ ✓	1 mark for method 1 mark for answer	
4.1 b	$\frac{3}{4} + 4\frac{1}{6} \div 5$ $= \frac{3}{4} + \frac{25}{6} \times \frac{1}{5}$ $= \frac{3}{4} + \frac{5}{6}$ $= \frac{9 + 10}{12}$ $= \frac{19}{12}$	1 mark for reciprocal 1 for method 1mark for answer	(3)
4.2	$\frac{3\,999-2\,500}{2\,500} \times 100\%$ = 59,96% or 60%	1 mark for method 1 mark for answer	(2)
4.3	R3 999 X 10% = R399,90	1 mark for method 1 mark for answer	(2)
4.4	$A = P(1 \times ni)$ $A = R5\,000(1 \times 4 \times 0,06)$ A = R6 200 Any other method accepted	1 mark for formula 1 mark for substitution 1 mark for answer	(3)
4.5	$A = P(1 + i)^n$ $= 15\,000(1 + 0,12)^2$ $= R\,9\,600(1.12)^2$ = R18 816 18 816 – 15 000 = R3 816		(4)

Question 5

5.1.1 $3 : 8 \rightarrow x : 24$ (2)

$x = 9$

5.1.2 $x : 77 \rightarrow 7 : 11$ (2)

$x = 49$

5.2.1 indirect proportion (1)

5.2.2 direct proportion (1)

5.3 Let the new price be x.

$x : 120 = 5 : 3$

$\frac{x}{120} = \frac{5}{3}$ (3)

$3x = 600$

$x = 200$