



HIS SCHOOL
MATHEMATICS

Term 1(2025)

March Test

GRADE 09

MARKS: 50

DURATION: 1
hour

DATE: 12
March 2025

EXAMINER:

Miss MP

Maraga

MODERATOR

: Mrs A

Tolope

LEARNER'S

NAME:

.....

QUESTION 1: Multiple choice questions

Four options are given as possible answers to the following questions. Circle the answer for the correct answer. If you made a mistake or change your decision, cross out your response and circle the new letter.

1.1. What kind of a number is $\sqrt{5}$? (1)

- A A natural number
- B A whole number
- C A rational number
- D An irrational number

1.2. The LCM of 96 and 108 is: (1)

- A 168
- B 2
- C 864
- D 96

1.3 A car travels 180 km in 2 hours on a straight road. How far can the car travel in 210 minutes at the same speed? (1)

- A 630 km
- B 25,7 km
- C 102,9 km
- D 315 km

1.4. The value of $3[-(-3 + 17)] - (-4) \times 2$ is equal to? (1)

- A 50
- B 46
- C -40
- D -34

1.5. Simplify: $4a^{12} \div 4a^3$ (1)

- A a^4
- B a^9
- C a^{15}
- D a^{36}

1.6. Consider the pattern

5; 8; 12; 17;

The next term in this pattern will be: (1)

- A 19
- B 21
- C 23
- D 20

[6]

QUESTION 2: Number systems, factors and multiples

2.1. Classify the following numbers as rational or irrational:

2.1.1. $4\frac{1}{2}$ (1)

2.1.2. $\sqrt{17}$ (1)

2.1.3. 2,141414..... (1)

2.2. Write the following numbers as products of their prime factors:

2.2.1. $135 =$ (1)

2.2.2. $225 =$ (1)

2.2.3. $315 =$ (1)

2.2.4. The HCF of 135, 225 and 315 = (1)

[7]

QUESTION 3: Ratio, rate and proportion

- 3.1. Two numbers are in the ratio 3 : 5. If the smaller number is 12, what is the greater number? (2)

- 3.2. If 3kg of potatoes cost R24, how much will 7kg cost? (2)

- 3.3. Zaheda travels for 6 hours partly by car at 100 km/h and partly by air at 300 km/h. If she travelled a total distance of 1200 km, how long did he travel by air? (4)

[8]

QUESTION 4: Finance

- 4.1. Peter invests R20 000 in an account paying 15% per annum compounded annually. Calculate the future value of his investment after 10 years. (3)

- 4.2. A car rental company has the arrangement of hiring their cars out at R175 a day plus R2 per kilometre for mileage over and above the included mileage of 500 km which is free. What would the total cost be if a car is rented for 5 days, and 850 km is covered in mileage. (3)

[6]**QUESTION 5: Integers**

- 5.1. Calculate without using a calculator.

5.1.1. $-6 + 4 - 23$ (2)

5.1.2. $11 - [-3 + 2 - (-1)]$ (3)

5.1.3. $4 \times (-28)$ (1)

5.14. $\sqrt{\sqrt{36} - \sqrt{4}}$ (3)

[9]

QUESTION 6: Exponents

6.1. Simplify:

6.1.1. $x^4 \times x^7$ (1)

6.1.2. $(4x)^0$ (1)

6.1.3. $\frac{3a^{-2}b \times 24b^{-1}a^{-1}}{9a^{-4}b^{-3}}$ (4)

6.1.4. $\frac{2^{n+2}}{2^{n-1}}$ (2)

[8]

QUESTION 7: Patterns

7.1. Consider the pattern:

5; 7; 9; 11;

7.1.1. Write down the next two terms of the pattern. (2)

7.1.2. Write down the general term of the given sequence in the form (2)

$T_n =$

_____ (2)

7.1.3. Determine the 100th term.

[6]

THE END