Hoërskool Johan Jurgens
Mathematics
Grade 8
Cycle Test – Term 1

Examiner: Ms. C. Giezing
Moderator: Ms. M. Botha

Time: 1 Hour
Date: 11 – 03 – 2026
Total: 50 marks

Name and Surname: _____

Grade: 8_____

Instructions and information:

1. Please write your name, surname and grade in the space provided on the question paper.
2. Please write your name, surname, grade and date on the folio paper.
3. This question paper consists of **FOUR** questions. Answer **ALL** the questions.
4. Read all the questions carefully and think before you answer.
5. Show **ALL** formulae, substitutions and **ALL** calculations.
6. Non- programmable calculators may be used.
7. You may use appropriate mathematical instruments.
8. Round off to two decimal places, unless otherwise stated.
9. Number the answers correctly according to the numbering system used in this question paper.
10. Leave **ONE** line between two sub-questions, for example between QUESTION 2.1 and 2.2.
11. Write with a blue pen and cross out with a pencil if you made a mistake.
12. If you do your calculations in pencil it **WILL NOT BE MARKED**.
13. Please write neatly and legibly. (If I can't read it I can't mark it!).
14. Take a deep breath, you got this!
15. **GOOD LUCK!!!**

Question 1:

1.1 Arrange the following numbers in ascending order. (1)

565 965 596, 596 965 596, 95 965 596, 65 965 596, 965 965 596

1.2 Which one of the following numbers is NOT a prime number? (1)

2 ; 7 ; 3 ; 11 ; 9 ; 19

1.3 Insert brackets in the following equation to make it true: (1)

60 ÷ 3 + 5 × 4 = 40

1.4 List the prime factors of 45: (1)

1.5 Calculate the following. Show your method.

1.5.1. 9 427 × 28 (3)

1.5.2. 6 783 ÷ 23 (4)

1.6 Determine the lowest common multiple of 6 and 15. (1)

1.7 Determine the highest common factor of 12; 16 and 48. (1)

1.8 A tank contained 660 liters of water. Through evaporation, the water was reduced by $\frac{1}{6}$. How much water was left in the tank? (1)

1.9 Write 0,000000357 in scientific notation. (1)

1.10. Nkosi buys a t-shirt for R78.50 and sells it for R149,99. His other expenses amount to R35,70 per t-shirt.

1.10.1 Calculate the amount of profit or loss he make per t-shirt. (2)

1.10.2 What is the percentage of profit he had made? (3)

1.10.3 He can import t-shirts from Temu at the cost of 35 Yaun.

1 Yaun = R0.9583. How much will a t-shirt cost in rand? (2)

1.10.4 The selling price of R149,99 does not include VAT. Calculate the amount of VAT payable? (3)

[25]

Question 2

Calculate the following using BODMAS. Show all your steps.

2.1 (-6) – (8) (1)

2.2 $\sqrt{225 - 81}$ (2)

2.3 - 12 – 2(-3) (2)

[5]

Question 3

3.1. Convert the following to improper fractions:

3.1.1 $2\frac{7}{9}$ (1)

3.1.2 4 (1)

3.2 Simplify without the use of a calculator:

3.2.1 $\frac{14}{4} \div \frac{21}{10}$ (3)

3.3 Calculate the following equations. Show all your steps.

3.3.1 $-1\frac{1}{2} + 2\frac{1}{7}$ (3)

3.3.2 $\frac{-5}{8} \times \frac{1}{10}$ (2)

[10]

Question 4

Calculate the following without the use of a calculator. Show all your calculations! The answer must be simplified.

4.1 38,417 + 7,764 (2)

4.2 17,3 x 100 (1)

4.3 7,5 ÷ 0,03 (3)

4.4 6,4 – 2,75 (2)

4.5 10 x $(-0.1)^2$ (2)

[10]

TOTAL: 50