

GRADE: _____

NAME: _____

SURNAME: _____

HMC 2019 - FIRST ROUND

FOR MATHEMATICS TEACHER

LEARNER'S

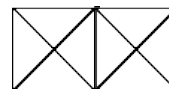
MARK

The paper consists of 20 multiple choice questions. Only one of the options is correct. There is no penalty for the incorrect answer. Have fun! Enjoy the paper & Good luck ☺

HORIZON MATHEMATICS COMPETITION

- Which one cannot be the perimeter of an equilateral triangle with integer sides?
A) 3 cm B) 30 cm C) 21 cm D) 16 cm E) 24 cm
- $5 \times 11 - 10 = ?$
A) 5 B) 65 C) 30 D) 45 E) 35
- $\frac{1}{2 - \frac{3}{4}} = ?$
A) $\frac{4}{5}$ B) $\frac{5}{4}$ C) $\frac{1}{5}$ D) 4 E) $\frac{1}{4}$
- Five times a number is decreased by five. What is this number if the answer is five?
A) 2 B) 5 C) 3 D) 1 E) 4
- $\frac{2}{3}$ of R750 is
A) R500 B) R600 C) R400 D) R300 E) R250
- How many positive common factors do 36 and 60 have?
A) 3 B) 4 C) 5 D) 6 E) 7
- Which of the following is true?
A) 2019 is a prime number
B) 21 is a prime number
C) 3 is the smallest prime number
D) 19 is not a prime number
E) 1 is not a prime number
- The next number in the sequence is; 99, 91, 83, 75, 67 ...
A) 58 B) 60 C) 59 D) 61 E) 62
- What is the cost of 200 grams of raisins, if the price is R120 for 6 kg?
A) R6 B) R5 C) R4 D) R2 E) R10
- Which of the following is false?
A) Trapezium has a pair of parallel sides.
B) Opposite angles of rhombus are always equal.
C) All vertices of a kite must be on the same circle.
D) Diagonals of a rectangle are equal in length.
E) Every square is a quadrilateral.
- If $a \otimes b = \frac{a^2 - 3b}{2}$ is defined, then determine the value of $7 \otimes 5$.
A) 13 B) 17 C) 15 D) 19 E) 11

- A palindrome is a word or a number (like RADAR or 12721) which reads the same forwards and backwards. If all 4-digit numbers are written, how many them are palindromes?
A) 100 B) 90 C) 99 D) 81 E) 80
- If $a - b$ is bigger than $a + b$, how many of the following statements can be correct?
I. a and b are both positive
II. a and b are both negative
III. a is positive and b is negative
IV. a is negative and b is positive
A) 1 B) 2 C) 3 D) All E) None
- Four years ago, when Kabelo was born, Sihle was three times as old as Bonginkosi. If Bonginkosi is 7 years old now, what is the sum of the ages of all these 3 brothers?
A) 12 B) 16 C) 20 D) 24 E) 28
- The lengths of the sides of a rectangle are 10 and 14. Find the area of the square which has the same perimeter with this rectangle.
A) 36 B) 100 C) 49 D) 64 E) 144
- Evaluate; $\sqrt{64 - \sqrt{225}}$
A) 7 B) -7 C) 4 D) -4 E) None
- $100 - 95 + 90 - 85 + 80 - 75 + 70 - 65 + \dots + 10 - 5 = ?$
A) 5 B) 50 C) 45 D) 55 E) 100
- A is the number when 3474 is rounded off to the nearest 100.
B is the number when 3474 is rounded off to the nearest 1000.
What is the sum of A + B ?
A) 6000 B) 7400 C) 6500 D) 6400 E) 7500
- In 2018, Peter's birthday was on a Wednesday in January. In 2019, on what day will his birthday occur?
A) Monday B) Tuesday C) Wednesday
D) Thursday E) Not enough information given
- How many triangles are there in the following figure?



- A) 8 B) 10 C) 12 D) 16 E) 18

