

GRADE: _____

NAME: _____

SURNAME: _____

HMC 2018 - FIRST ROUND

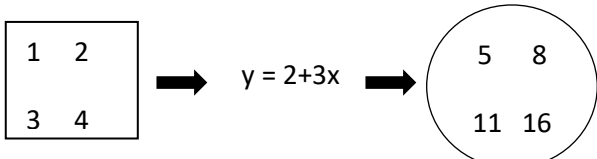
FOR MATHEMATICS TEACHER

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

- Thabo finishes 4 packs of chips in 5 minutes. How long does it take him to finish 20 packs?
A) 25 min B) 4 minutes C) 5 min D) 20 min E) 100 min
- Jafta lives in a farm house with his father, mother, 2 sisters and brother as well as 2 dogs, 10 cattle, and 4 chickens. They also have 8 koi fish in their pond. How many legs are there in the farm?
A) 22 B) 68 C) 36 D) 44 E) 80
- If John had to sell the last few peaches that he had bought for 60 cents for 54 cent, what percentage loss did he make on the cost price of the peaches?
A) 10% B) 12% C) 8% D) 4% E) 6%
- Khumo has 3 hours available to do his homework and to practice his soccer ball skills. He spends three quarter of an hour on an essay, 35 minutes on mathematics and two third of an hour on science homework. What fraction of his available time can he spend on soccer?
A) 1 B) $\frac{1}{3}$ C) $\frac{2}{3}$ D) $\frac{3}{4}$ E) $\frac{1}{2}$
- Trevor is a medical researcher and now earns R1800 per day after he received a 50% salary increase. What did he earn per day without the increase?
A) R1000 B) R1200 C) R1500 D) R900 E) R1400
- Gareth planted $\frac{7}{25}$ of his garden with tomatoes, $\frac{1}{10}$ with marrows and $\frac{3}{20}$ with carrots. What percentage of his garden is unplanted?
A) 53% B) 45% C) 47% D) 55% E) 50%
- The numbers in the rectangle is processed by the function of $y = 2 + 3x$ to obtain the numbers in the circle. Find the number in the circle which has been processed incorrectly.

A) 5 B) 16 C) 8 D) 11 E) None
- If the sum of **three consecutive odd** numbers is 309, then find the largest amongst these numbers.
A) 103 B) 107 C) 105 D) 109 E) 101
- Divide 30 by a half and add 10. What is the answer?
A) 25 B) 50 C) 70 D) 20 E) 35
- Which of the following fractions is the largest?
A) $\frac{13}{14}$ B) $\frac{4}{5}$ C) $\frac{6}{7}$ D) $\frac{15}{16}$ E) $\frac{7}{8}$
- Bongani and Rich got holiday jobs at the local supermarket. They both get the same amount of money in salary. Bongani does stock control and gets paid R15 per hour. Rich works at customer services and gets paid R12 per hour. If Rich works 10 hours per day, how many hours does Bongani have to work in order to earn the same amount?
A) 6 B) 10 C) 8 D) 16 E) 18
- 240 people were asked which brand of coffee they liked best. 45% chose brand A, 20% brand B, 15% brand C and the rest chose brand D. How many people chose brand D?
A) 108 B) 36 C) 72 D) 48 E) 24
- If the total surface area of a cube is 600cm^2 , then its volume is...
A) 360000cm^3 B) 36000cm^3 C) 3600cm^3 D) 1000cm^3 E) 900cm^3
- Adam has 30 identically shaped colored discs in a bag. 12 are red, 8 are blue, 6 are green and the rest are yellow. What is the minimum number of discs he must take out of the bag, without replacing them, in order to ensure that he has one of each color?
A) 4 B) 30 C) 5 D) 6 E) 27
- What is the sum of all three-digit numbers that can be formed using the numbers 1, 2 and 3, without repeating any digit?
A) 1234 B) 1213 C) 1331 D) 1332 E) 1234
- A large wooden block with length of 40cm, breadth of 50cm and height of 60cm is cut into smaller rectangular blocks. How many small blocks with length of 30cm, breadth of 25cm and height of 20cm can be sawn from the large block, if there is no wastage?
A) 1 B) 2 C) 3 D) 4 E) None
- There are 10 cricket teams in a tournament. How many games must be played so that each team plays with every other team exactly once?
A) 40 B) 11 C) 49 D) 10 E) 45
- Of the 35 learners in Grade 7A class, 18 learners have a dog, 24 learners have a cat, while 6 have no pets. How many learners have dog and cat?
A) 13 B) 7 C) 6 D) 3 E) 8
- Which one is an even number?
A) $100 \times 13 - 11$ B) $2018 - 1453$ C) $2018 \times 9 + 1$
D) $1 \times 2 \times 3 \times 4 \times 5 \times 6 - 7$ E) None
- Evaluate; $\sqrt{70 - \sqrt{36}}$
A) 8 B) 6 C) 5 D) 7 E) 9

