

GRADE:
NAME:
SURNAME:

HMC 2015 – FIRST ROUND

FOR MATHEMATICS TEACHER
LEARNER'S
MARK

HORIZON MATHEMATICS COMPETITION

1. 30% of 300 equals

- A) 30 B) 100 C) 9 D) 90 E) 99

2. $20 \div 4 - 2 + 2 \times 3 = ?$

- A) 9 B) 11 C) 5 D) 16 E) 36

3. $5^2 - 4^2 - 3^2 + 2^2 = ?$

- A) 0 B) 2 C) 4 D) 6 E) 8

4. Which of the following has the most number of factors?

- A) 20 B) 24 C) 28 D) 45 E) 50

5. $\frac{3}{5} - \frac{1}{2} = ?$

- A) $\frac{2}{3}$ B) $\frac{3}{10}$ C) $\frac{1}{2}$ D) $\frac{4}{7}$ E) $\frac{1}{10}$

6. $2.121 - 1.212 = ?$

- A) 1.909 B) 0.909 C) 1.919 D) 0.999 E) 1.009

7. Which number is 44 more than half of 222?

- A) 100 B) 122 C) 133 D) 144 E) 155

8. The perimeter of a rectangle is 40cm. Which one cannot be the length of one of its sides?

- A) 1cm B) 4cm C) 20cm D) 11cm E) 9cm

9. What will be the time 2015 minutes after 20:15?

- A) 05:50 B) 15:30 C) 16:30 D) 13:50 E) 09:35

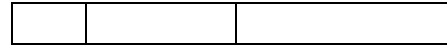
10. The 2015th letter of MATHSMATHSMATHSMATHSM.... is

- A) M B) A C) T D) H E) S

11. A vertical flagpole is held up by a wire. The angle between the ground and the wire is twice the angle between the pole and the wire. The angle between the pole and the wire is

- A) 80° B) 60° C) 40° D) 30° E) 20°

12. How many rectangles in different sizes altogether can be determined in the shape given below?



- A) 3 B) 4 C) 5 D) 6 E) 7

13. Jabulani has 3 banknotes of R100, 5 banknotes of R50, and 7 coins of 5 rand. How much money does he have in total?

- A) R525 B) R585 C) R535 D) R575 E) R595

14. The next number in the sequence; 99, 90, 83, 78, 75,... is

- A) 70 B) 71 C) 72 D) 73 E) 74

15. If $a \oplus b = a + 3 \times b - a^2$, then find $1 \oplus 2$

- A) 7 B) 6 C) 5 D) 4 E) 3

16. 3 times a number, increased by 30, is 330. What is this number?

- A) 100 B) 110 C) 120 D) 130 E) 900

17. A certain quadrilateral has each angle 10° greater than the previous one, except the smallest angle. How large is the smallest angle?

- A) 80° B) 70° C) 75° D) 90° E) 60°

18. Which of the following fractions is more than 2?

- A) 5/3 B) 11/6 C) 22/12 D) 19/9 E) 15/8

19. At a meeting there are 15 handshakes altogether. If each person shakes his/her hand with every other person just once, how many people were there in total?

- A) 8 B) 5 C) 15 D) 10 E) 6

20. If 200 grams of breakfast cereal contain 24 grams of fat, how much fat is in 350 grams of cereal?

- A) 42 B) 48 C) 36 D) 40 E) 44