

GRADE: \_\_\_\_\_  
 NAME: \_\_\_\_\_  
 SURNAME: \_\_\_\_\_

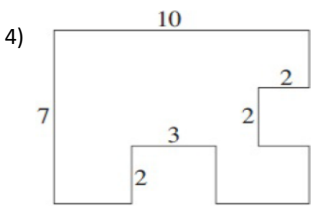
# HMC 2017- FIRST ROUND

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

- 1) Which of the following is an odd number?  
 A)  $1 \times 4 - 4 \div 4$       B)  $2 \times 0 + 4 \div 2$       C)  $5 + 2 \div 2$   
 D)  $2 + 0 \times 1 + 4$       E)  $3 + 0 \div 4 + 1$
- 2) The sum of two number is 21. What is the maximum value of product?  
 A) 110      B) 80      C) 100      D) 20      E) 120
- 3) How many prime numbers between 25 and 100 end with a 6?  
 A) 8      B) 0      C) 1      D) 11      E) 3



In figure, if every angle in the polygon is a right angle, then what is the perimeter of the polygon?

- A) 34      B) 42      C) 47      D) 52      E) 60
- 5) Meldon and Kameel together weight 300 kgs. Kameel and Tino together weight 240kgs. If all three people together weigh 410 kgs, then what is Kameel's weight in kgs?  
 A) 110      B) 120      C) 130      D) 115      E) 145
- 6) How many multiples of 3 are between 23 and 82?  
 A) 23      B) 19      C) 20      D) 21      E) 22
- 7) If  $q$  is odd, which one is even?  
 A)  $q/2$       B)  $q+2$       C)  $2q+1$       D)  $q(q+1)$       E)  $qxqxq$
- 8)  $243 - 125 + 10\%$  of  $170 =$   
 A) 105      B) 115      C) 125      D) 135      E) 145
- 9) Valli is going to paint his bedroom walls. The blue paint is too dark so he mixes 5 parts of white paint with 2 parts of blue paint to get a lighter shade. How many liters of white paint should he mix 2,6 liters of blue paint?  
 A) 7.8      B) 3.9      C) 13      D) 5.2      E) 6.5

- 10) The grocery store wants to make a triangular display by placing tins of baked beans on their sides against a wall. How many tins will they need if they use 15 tins for the first row?



- A) 225      B) 100      C) 144      D) 160      E) 120

- 11) If you aim to save at least R292 this year, how much cents must you put aside each day?  
 A) 80      B) 75      C) 60      D) 40      E) 90
- 12) The sum of three consecutive even numbers is 66. What is the product of these numbers?  
 A) 13728      B) 10560      C) 8000      D) 7120      E) 5280
- 13)  $12 \times (4 + 2) \div 3 =$   
 A) 10      B) 12      C) 24      D) 36      E) 48
- 14)  $\left(1 - \frac{1}{2}\right) \times \left(1 - \frac{1}{3}\right) \times \left(1 - \frac{1}{4}\right) \times \left(1 - \frac{1}{5}\right) = ?$   
 A) 1      B)  $\frac{1}{2}$       C)  $\frac{1}{6}$       D)  $\frac{1}{5}$       E)  $\frac{1}{120}$
- 15) How many two-digit numbers are there for which both of the digits are odd?  
 A) 50      B) 22      C) 20      D) 33      E) 25
- 16) In a competition you are required to estimate how many sweets are in a glass jar. You know a box of those sweets contain 153 packs of 33 sweets. By your estimation the jar is  $\frac{1}{9}$  of the size of the box. How many sweets would you estimate are in the glass jar?  
 A) 550      B) 500      C) 450      D) 750      E) 600
- 17) If you obtained 84% for your Mathematics test, what was your mark out of 250?  
 A) 180      B) 210      C) 168      D) 220      E) 190
- 18) Assuming 64 000 people attended a Rugby match and they drank an average of 1,5 liters cool-drinks per spectator, what was the average sale per vendor if there were 160 vendors selling cool-drinks rounded off to the nearest whole number?  
 A) 800      B) 750      C) 600      D) 500      E) 450
- 19)  $3 \times ? + 2.5 = 4.5$   
 A)  $\frac{3}{2}$       B)  $\frac{1}{3}$       C) 1      D)  $\frac{2}{3}$       E) 1.5
- 20) John and Leon are twins. Product of their ages is between 60 and 80. What is the Leon age?  
 A) 70      B) 32      C) 12      D) 9      E) 8