

PRIMARY SCHOOL
CHALLENGE 2019

LEVEL 1 CHALLENGE
GRADE 4 AND 5 ROUND TWO

INSTRUCTIONS

1. The time allocated for this paper is $1\frac{1}{2}$ hours.
All participants must remain for the full allocated time.
Under no circumstances may extra time be given.
2. This paper consists of two sections.
Section A consists of 10 multiple choice questions.
Section B consists of 5 questions where working out must be shown.
3. Question 1 – 10 are worth 2 marks each.
Question 11 – 15 are worth 4 marks each.
4. Negative marking will not be applied.
5. Calculators (and other calculating devices) and geometry instruments are not allowed.
6. Figures are not necessarily drawn to scale.
7. Answer all questions on the answer sheet provided.
8. Circle the letter you have chosen as your answer in pen for Section A (Questions 1 – 10).
Should you wish to change an answer, put a cross over the letter and then circle your new chosen letter.
9. For Section B (Questions 11 – 15), full working must be shown in the space provided.
Your final answer must be written in the allocated space.
10. Paper may be used for rough working.

SECTION A

1. What is the sum of the three question marks (?) in the equations below?

$$\frac{1}{3} = \frac{?}{12} \quad ; \quad \frac{5}{4} = \frac{?}{12} \quad ; \quad 2\frac{1}{6} = \frac{?}{12}$$

- A. 32 B. 45 C. 38 D. 50 E. 44

2. What is the 22nd term in the sequence 1, 2, 2, 3, 3, 3, 4, ?

- A. 21 B. 6 C. 22 D. 7 E. 8

3. In the given sum, A, B, C, D, and E each are different single units, and C is even. What is the value of $A + B + C + D + E$?

$$\begin{array}{r} A \\ B B \\ + \underline{C D D E} \\ \hline 2 0 1 9 \end{array}$$

- A. 11 B. 8 C. 10 D. 12 E. 9

4. A builder knows that he can cut a long piece of wood into 6 pieces in 15 minutes. In a new job, the builder needs to cut a similar piece of wood into 10 pieces. He works at the same rate as before. If he starts cutting at 10:45am, what time will he complete the job?

- A. 11:08am B. 11:12am C. 11:00am D. 11:10am E. 11:15am

5. In the diagram, what is the value of P?

- A. 8
- B. 12
- C. 4
- D. 10
- E. 6

31				
3P	19			
7	21	3		
17	1	8	5	
4	9	10	0	2P

6. A grasshopper jumps six times in a straight line. The first jump is 16 metres. Each of the next five jumps are half the distance of the previous jump. How far is the grasshopper from its starting point after the six jumps?

- A. 32,5 m
- B. 33 m
- C. 31,5 m
- D. 30,5 m
- E. 30 m

7. If $\otimes + \otimes + \otimes = 36$ and $\triangle \times \triangle \times \triangle = 27$, what is the value of $\otimes \div \triangle$? (\otimes and \triangle are whole numbers)

- A. 4
- B. 9
- C. $\frac{4}{3}$
- D. 3
- E. $\frac{1}{4}$

8. A class of pupils lined up one behind the other. Brian was standing 7th from the front. Penny was standing 7 places behind Brian, and 20th from the back. How many pupils were in the queue?

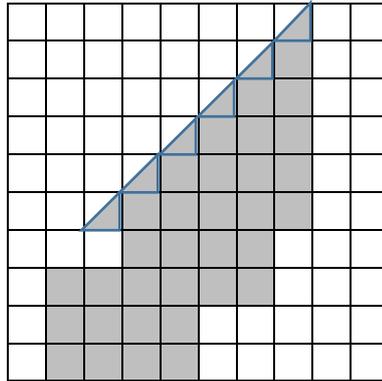
- A. 34
- B. 38
- C. 31
- D. 33
- E. 32

9. Brenda has exactly enough money to buy 4 pens and 10 pencils, or to buy 6 pens and 6 pencils. She decides to use all her money to only buy pencils. How many pencils can she buy?

- A. 16
- B. 18
- C. 15
- D. 20
- E. 14

10. In the figure, the large square is filled with small squares. If the area of the large square is 100 cm^2 , what is the area of the shaded area in cm^2 ?

- A. 34
- B. 32
- C. 54
- D. 38
- E. 36



SECTION B

NB : Show all working and write your final answer in the allocated space.

11. Amy invites 11 friends to her 11th birthday party. Her mother baked three cakes. Amy's mother cut the first cake into 12 slices, and the second cake into 14 slices. What is the least (smallest) number of slices she needs to cut the last cake into such that all the children at the party receive an equal number of slices of cake?
12. Four apples cost R2.00. Five oranges cost R2.50. Six bananas cost R3.50. You wish to make up teams at your school and give each team a packet containing 4 apples, 5 oranges, and 6 bananas. What is the greatest number of teams you can make up if you have R150.00 to spend?

13. The diagram shows a whole number N which has the following operations applied to it in order left to right: $\div 2$ then $+2$ then $\times 2$ then -2 . After these operations on N , its value has been changed to 42. What is the value of N ?



14. A number is divisible by another number if there is no remainder.
 A number is divisible by 8 if its last three digits are divisible by 8.
 A number is divisible by 9 if the sum of its digits is divisible by 9.
 M and N are single digits in the number 47M25N.
 If this number is divisible by both 8 and 9, what is the value of $M+N$?
15. At a school fundraising day, juices sell for R9 each, chocolates sell for R3 each, and buns sell for R5 each. You have R50 to spend. What is the maximum (most) number of these items you can buy if you receive no change and buy at least one of each?