

PRIMARY SCHOOL
CHALLENGE 2019

LEVEL 1 CHALLENGE
GRADE 4 AND 5 ROUND ONE

INSTRUCTIONS

1. The time allocated for this paper is 1 hour.
Under no circumstances may extra time be given.
2. This paper consists of 20 multiple choice questions.
Each question only has one correct answer.
3. Questions 1-15 are each worth 1 mark. Questions 16-20 are each worth 2 marks.
4. Negative marking will not be applied.
5. Calculators (and other calculating devices) and geometry instruments are not allowed.
6. Figures are not drawn to scale.
7. Answer all questions on the answer sheet provided.
8. Circle the letter you have chosen as your answer in pen. Should you wish to change an answer, put a cross over the letter and then circle your new chosen letter.
9. Paper may be used for rough working.

1. What is the value of $7 - 3 \div \frac{1}{2} + 5 \times 0$?

- (A) $5\frac{1}{2}$ (B) 2 (C) 6 (D) 1 (E) $10\frac{1}{2}$

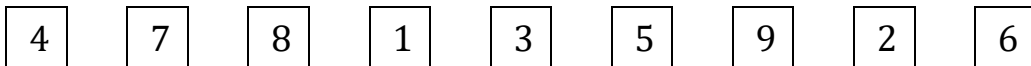
2. Which of the following is the largest?

- (A) $(25+29) \div 2$ (B) $(3+0) \times 8$ (C) $10 \times 3 - 2$ (D) $20 + 2 \times 3$ (E) $(7-5) \times 13$

3. If the word BEYOND is represented as the number 252515144, what number represents the word MATHS?

- (A) 13119820 (B) 14243466 (C) 13120718 (D) 15251542 (E) 13120819

4. Nine cards are shown, numbered 1 – 9. One card is turned over. The sum of the remaining cards is four times the value of the card turned over. What is the number on the card that was turned over?



- (A) 6 (B) 8 (C) 7 (D) 9 (E) 5

5. Brian bought 120 apples for R2 each. He later found that $\frac{1}{10}$ of them were rotten, and he threw them away. He sold all the remaining apples for R2.50 each. What was his *profit*? (How much more did he sell the apples for than he paid for them?)

- (A) R50 (B) R25 (C) R40 (D) R35 (E) R30

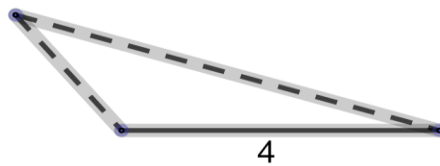
6. If $a \otimes b = b \times b - 4 \times a$, what is the value of $\frac{1}{4} \otimes 4$?

- (A) 10 (B) 15 (C) 12 (D) 0 (E) 16

7. Which of the following fractions is the largest?

- (A) $\frac{7}{20}$ (B) $\frac{1}{4}$ (C) $\frac{4}{10}$ (D) $\frac{1}{5}$ (E) $\frac{14}{40}$

8. A triangle has a perimeter of 18 units. If the *base* is 4 units, how many different looking triangles may be drawn if all the lengths are *whole numbers*? Note that triangles may only be constructed above the base. A possible shape, not to scale, is shown.



- (A) 2 (B) 3 (C) 4 (D) 5 (E) 6

9. If $10 \square 28 \square 4 \square 9 = 8$, then the mathematical operations inside the squares, in order, are:

- (A) $- + \times$ (B) $+ - \div$ (C) $+ + -$ (D) $+ \div -$ (E) $+ \times \div$

10. If $2 \times A + 5 = 43$, what is the value of $5 \times A + 2$?

- (A) 102 (B) 86 (C) 97 (D) 99 (E) 89

11. If $2 ; 1 = 3$
 $6 ; 2 = 7$
 $8 ; 3 = 10$
 $12 ; 5 = 16$, what is the value of $14 ; 5$?

- (A) 21 (B) 27 (C) 19 (D) 23 (E) 17

12. If $(\text{GRADE} \div 4) + (\text{GRADE} \div 5) = 36$, where GRADE is a *2-digit whole number*, what is the sum of the digits of GRADE?

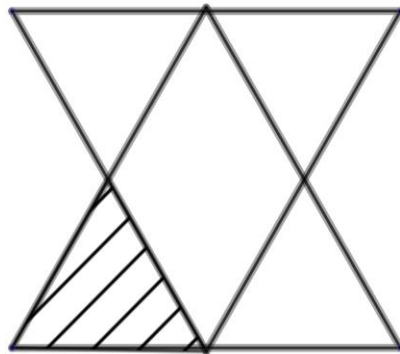
- (A) 10 (B) 12 (C) 8 (D) 6 (E) 9

13. In the diagram, what is the value of N?

3			
6	7		
15	N	9	
21	6	12	2

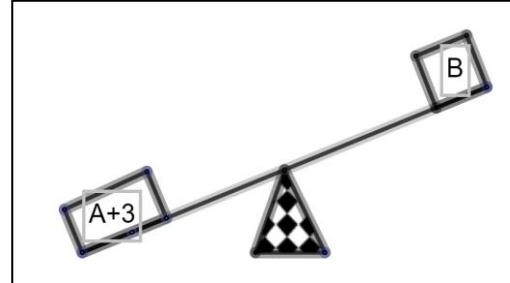
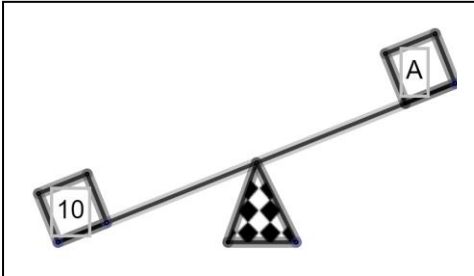
- (A) 3 (B) 8 (C) 5 (D) 4 (E) 1

14. Two large *equilateral* triangles of the same size are symmetrically placed on top of each other as shown. If the shaded area is 9 cm^2 , what is the area of the total figure in cm^2 ?



- (A) 48 (B) 52 (C) 54 (D) 45 (E) 46

19. The diagram shows various weights on balance beams, (like see-saws).
 $\boxed{10} = 10$ kg. If weights A and B are at least 2 kg, and are both *whole* numbers, what is the *sum* of all possible weights of B? (A+3 means weight of A plus 3 kg)



- (A) 44 kg (B) 60 kg (C) 50 kg (D) 65 kg (E) 49 kg

20. $P = \frac{x}{x-2}$ where x and P are single digit whole numbers. How many values of P can be calculated?

- (A) 1 (B) 2 (C) 3 (D) 4 (E) 5

***** END *****