

PRIMARY SCHOOL
CHALLENGE 2017

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. Each question is worth one mark.
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. If you saved R2 on 1 January, R4 on 1 February, R6 on 1 March, and so on, how much money would you save in 1 year?

- (A) R156 (B) R24 (C) R96 (D) R42 (E) R160

2. Each symbol is worth a number. The total of the symbols can be found alongside each row.

				8
				20
				4

Calculate:  +  +  = ?

- (A) 1 (B) 2 (C) 5 (D) 8 (E) 32

3. A domino piece is made up of two squares. Each square contains either no dot or up to six dots. The number of dots on the two squares can be equal but (3, 4) and (4, 3) are regarded as the same. How many different domino pieces are there?

- (A) 21 (B) 28 (C) 36 (D) 42 (E) 49

4. What is the smallest whole number with exactly 5 factors?

- (A) 56 (B) 12 (C) 81 (D) 20 (E) 16

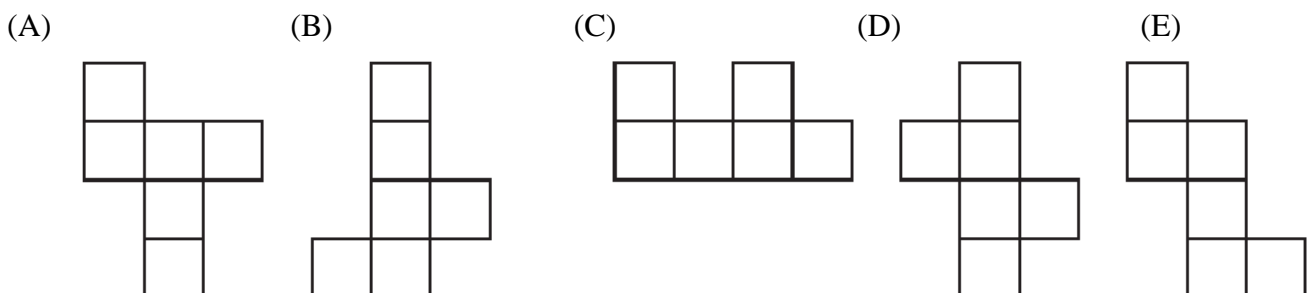
5. A palindromic number is a number that reads the same forwards and backwards (e.g. 12321). On a 24hr digital clock, how many palindromic times are there in one day (e.g. 02:20)?

- (A) 15 (B) 16 (C) 20 (D) 24 (E) 25

6. In one calendar month, the sum of the dates in a particular week (Sunday to Saturday) is 70. What is the date on the Friday of that week?

- (A) 12 (B) 11 (C) 16 (D) 10 (E) 14

7. Which of the following nets will not make a cube?



8. In a number sequence, the third and fifth numbers are 52 and 208 respectively. What is the seventh number of the sequence?

- (A) 432 (B) 312 (C) 1 056 (D) 832 (E) 998

9. Joe had a number of jelly-beans. Half of them were red, one third of them were blue, and the rest were green. Amanda took one third of the red ones and half of the green ones. Casandra took half of the remaining red ones and a quarter of the blue ones. Exactly 54 jelly-beans remained in total. How many were there originally?

- (A) 75 (B) 86 (C) 97 (D) 108 (E) 209

10. A pretty necklace was made with red and white beads as follows:



This necklace has 75 beads. How many were red beads if red is indicated as: ●

- (A) 20 (B) 35 (C) 40 (D) 55 (E) 60

11. In this addition sum, different letters stand for different digits, but each letter represents the same value each time it appears. If the letter O stands for 7, what digit must U represent?

$$\begin{array}{r} \text{T W O} \\ + \text{T W O} \\ \hline \text{F O U R} \end{array}$$

- (A) 0 (B) 1 (C) 3 (D) 5 (E) 9

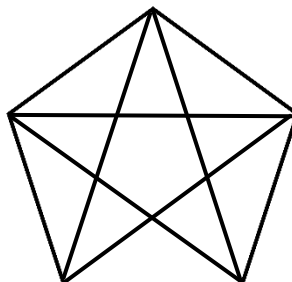
12. Jane is triple the age of her niece. How old will Jane be in 10 years' time, if her niece is the square of 4, now?

- (A) 58 (B) 34 (C) 24 (D) 52 (E) 48

13. How many 4-digit numbers, smaller than 2017, can be formed using the digits 0, 1, 2 and 7 without repetition?

- (A) 24 (B) 18 (C) 12 (D) 10 (E) 6

14. How many triangles are in this figure?

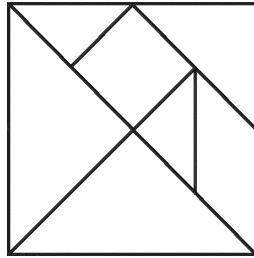


- (A) 25 (B) 18 (C) 31 (D) 40 (E) 35

15. A fence, made up of poles and wire, surrounds a square garden. If the poles are 1 metre apart, and there are 6 poles on each side, what is the perimeter of the garden?

- (A) 16 m (B) 20 m (C) 24 m (D) 30 m (E) 36 m

16. In this tangram, what fraction is the smallest triangle of the whole shape?

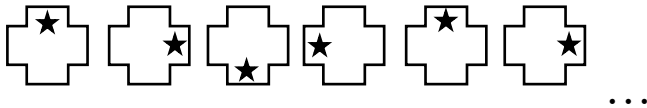


- (A) $\frac{1}{8}$ (B) $\frac{1}{12}$ (C) $\frac{1}{14}$ (D) $\frac{1}{16}$ (E) $\frac{1}{20}$






17. What would 2017 be in Roman numerals?

- (A) VIIMXM (B) MMXVII (C) VIIXMM (D) MMIIIXX (E) MMXIIIIII

18. There is a pattern to the sequence of figures below.



Which of the following will be the 2017th figure in the sequence?

- (A)  (B)  (C)  (D)  (E) 

19. A ball is dropped from a height of 96 cm. Each time the ball bounces, it travels back up half the distance from which it fell. How many centimetres has the ball travelled when it hits the ground for the fifth time?

- (A) 276 cm (B) 186 cm (C) 480 cm (D) 204 cm (E) 189 cm

20. In a class of 45 students, 20 of them join the volleyball team, 15 join the basketball team and 4 join both. How many students join neither volleyball nor basketball team?

- (A) 6 (B) 8 (C) 10 (D) 12 (E) 14