

PRIMARY SCHOOL
CHALLENGE 2018

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.

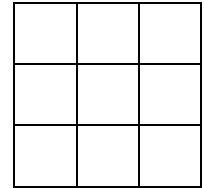
1. Which of these are correct?

- (A) $354 \times 265 = 93\ 812$ (B) $378 \times 119 = 33\ 086$ (C) $333 \times 258 = 85\ 914$ (D) $369 \times 110 = 40\ 595$ (E) $278 \times 352 = 97\ 857$

2. Zama buys 5 boxes of apples. Each box contains 63 apples. She packs 7 apples in a packet. How many packets can she fill?

- (A) 8 (B) 45 (C) 35 (D) 9 (E) none of these

3. Eight red Smarties and one blue Smartie are randomly placed in the grid alongside, no more than one in each small square. What is the probability that the blue Smartie is in the centre square?



- (A) 1 (B) $\frac{1}{9}$ (C) $\frac{1}{2}$ (D) $\frac{1}{8}$ (E) $\frac{1}{3}$

4. My sister has to take 5 ml of cough mixture 4 times a day for a week. How much medicine does she take?

- (A) 140 ml (B) 100 ml (C) 35 ml (D) 20 ml (E) 150 ml

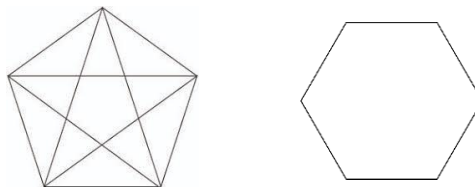
5. My aunt is baking a lot of lemon tarts. If she uses $3\frac{1}{2}$ lemons for each tart, how many tarts can she make with 35 lemons?

- (A) 12 (B) 11 (C) 10 (D) 7 (E) $3\frac{1}{2}$

6. Which of these numbers is divisible by 10 different numbers?

- (A) 72 (B) 100 (C) 64 (D) 120 (E) 48

7. A diagonal joins two corners inside a polygon, as shown in the pentagon below. How many diagonals does a hexagon have?



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

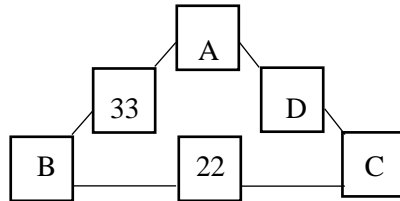
8. Concrete blocks have a mass of 35kg each, and Mr Pillay's truck can carry only $\frac{1}{2}$ a ton. How many concrete blocks can he carry on his truck in one load?

- (A) 14 (B) 15 (C) 17 (D) 18 (E) 70

9. A group of children (less than 40) are playing games. If they are divided into 5 groups, there are 2 children left out. If they are divided into 6 groups, 3 children are left out. How can they be grouped so that no children are left out?

- (A) pairs (B) groups of three (C) groups of four (D) groups of seven (E) someone will always be left out

10. The rule used in finding the correct numbers to put in the squares below is: the number in the centre square is the sum of the numbers in the corner squares. If $A + B + C = 40$, find D.



- (A) 19 (B) 33 (C) 17 (D) 30 (E) 25

11. A survey was taken to discover the favourite reading genres of a group of children. The results were: Mystery 36; Science fiction 24; Fantasy 18; History 12; Biography 9; Reference 9. What fraction on a pie chart would represent the Mystery genre?

- (A) $\frac{1}{3}$ (B) $\frac{1}{4}$ (C) $\frac{1}{5}$ (D) $\frac{36}{105}$ (E) 36%

12. There are 10 pairs of brown socks, 1 pair of red socks and 1 pair of green socks all mixed up in a cupboard. If you are blindfolded and reach in to take out one sock at a time, what is the least number of socks you need to take out to be sure that you have a matching pair of the same colour?

- (A) 2 (B) 3 (C) 4 (D) 7 (E) 9

13. You have three R2 coins and four R5 coins. How many objects costing the following amounts can you buy if no change is given?

R3	R7	R8	R11	R16	R17	R18	R22	R23	R26	R27
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- (A) 3 (B) 4 (C) 5 (D) 6 (E) 7

14. How many even 4-digit numbers can be created using only the digits 2018 without repeating any single digit in any single number?

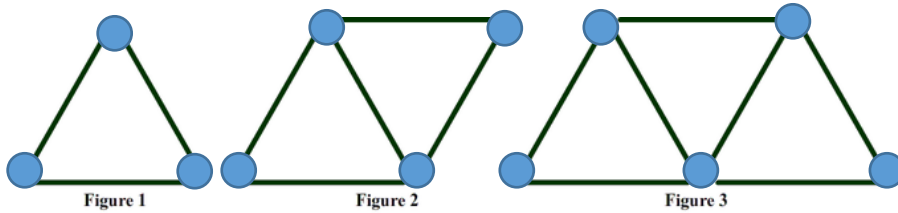
- (A) 8 (B) 10 (C) 12 (D) 14 (E) 18

15. What would the answer be to this addition sum?

	8	3	6	4	—
	5	—	7	8	6
+	8	9	—	7	7
—	—	3	4	—	4

- (A) 233 404 (B) 233 394 (C) 213 394 (D) 213 404 (E) none of these

16. The following figures are made from jelly tots and toothpicks. How many jelly tots in figure 10 will have exactly 4 toothpicks in them?



- (A) 17 (B) 12 (C) 10 (D) 9 (E) 8

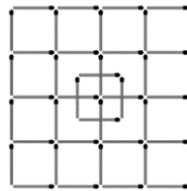
17. A 6-sided dice numbered 1 to 6 on each side is rolled and the number on top of the stationary dice is recorded. A similar second dice is rolled and the number recorded as before. If we apply the rule: “Multiply the number recorded on the first dice by the number recorded on the second dice”, how many different possible answers are there greater than 15?

- (A) 7 (B) 8 (C) 10 (D) 11 (E) 12

18. Shaun finished early so Mrs Govender asked him to cut pieces of paper which were 300mm by 250mm from large sheets which were 1100mm by 1600mm. What is the most pieces that he could cut from each sheet?

- (A) 16 (B) 18 (C) 20 (D) 23 (E) 24

19. How many squares can you count in the figure shown?



- (A) 17 (B) 25 (C) 31 (D) 35 (E) 21

20. The birthdays of all the children in Grade 5 at a Durban school are spread quite evenly across the year. The same number were born in May, August and October as were born in January. Twice as many were born in February as were born in December. Three less were born in July than were born in May. Two more were born in November than were born in April. The same number were born in June as were born in September. Nine were born in January. The same number were born in March as in November. Two more were born in February than in July. The same number were born in April as in July. One more was born in March than in June and September. How many children in total were in Grade 5 at this school?

- (A) 86 (B) 90 (C) 92 (D) 88 (E) 105