



# Singapore Math Kangaroo Contest 2019

## Primary 4 / Grade 4 Contest Paper

Name: \_\_\_\_\_

School: \_\_\_\_\_

### INSTRUCTIONS:

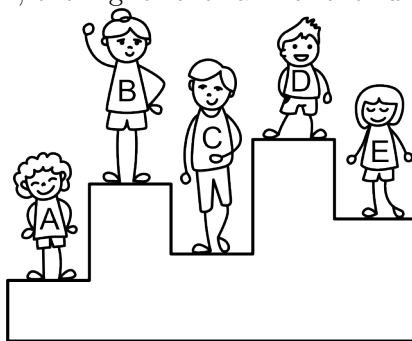
1. Please **DO NOT OPEN** the contest booklet until the Proctor has given permission to start.
2. **Duration: 1 hour and 30 minutes**
3. There are 24 questions in this paper. Each question scores 3 points in Section A, 4 points in Section B and 5 points in Section C. No points are deducted for Unanswered question.  
**1 point is deducted for Wrong answer.**
4. Shade your answers neatly in the answer entry sheet. **Ignore the questions 25 to 30 on the Answer Entry Sheet.**
5. PROCTORING: No help should be given to any student in any way during the contest.
6. **No calculators** are allowed.
7. All students must fill and shade in your **Name, Index number, Level and School** in the Answer sheet provided.
8. Students are not allowed to leave the venue within the first hour of the contest and 15 minutes before the end of the contest.
9. Students must show detailed working and transfer their answers to the answer entry sheet.
10. No spare papers can be used in writing this contest. Enough space is provided for your working of each question.
11. Students are not allowed take any answer script, reference materials and contest paper out of the venue.

# **Rough Working**

**Section A** (Correct – 3 points | Unanswered – 0 points | Wrong – deduct 1 point)


**Question 1**


The higher the step on the podium, the higher the rank of the runner. Who finished third?



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

**Question 2**

Each dot stands for 1 and each bar stands for 5. For example,  stands for 8. Which choice stands for 12?

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

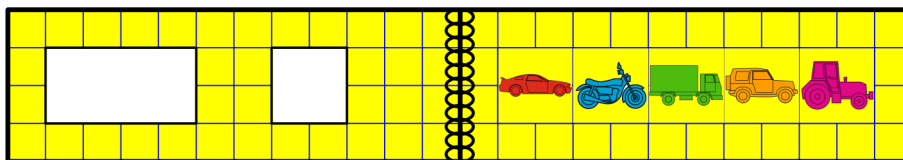
**Question 3**

Yesterday was Sunday. What day is tomorrow?






- (A) Tuesday      (B) Thursday      (C) Wednesday      (D) Monday      (E) Saturday

**Question 4**

There are two holes in the cover of a book. When the book is open, it looks like the following:

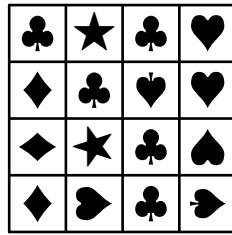


Which pictures does Olaf see through the holes when the book is closed?

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

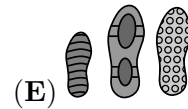
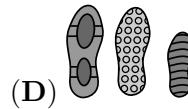
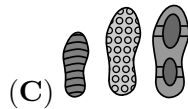
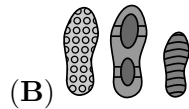
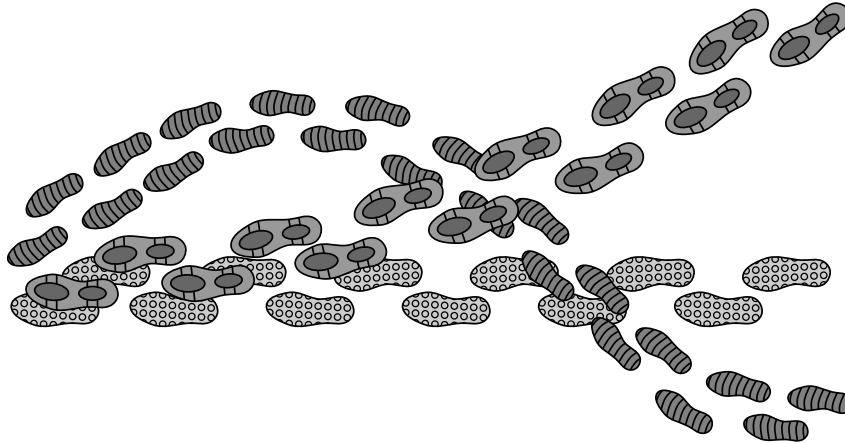
**Question 5**

Which piece can Karina cut out from the square below?



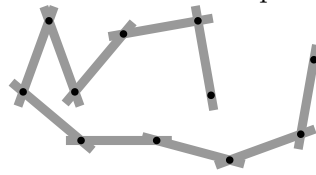
**Question 6**

Three people walked across a field of snow wearing muddy shoes. In which order did they walk across the field?

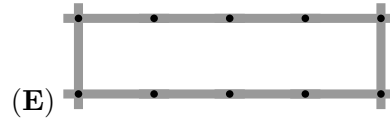
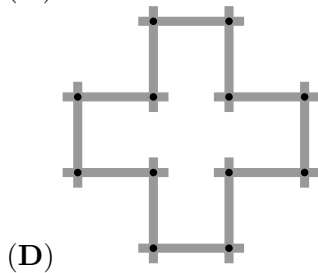
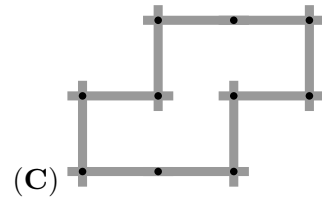
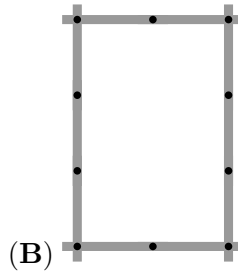
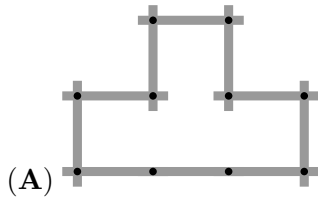


**Question 7**

Pia makes shapes with the connected sticks shown in the picture.

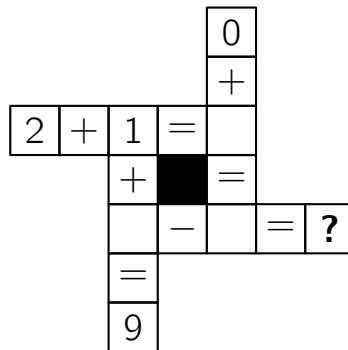


Which of the following shapes needs more sticks than Pia has?



**Question 8**

What number should replace the question mark when all the calculations are completed correctly?



(A) 4

(B) 5

(C) 6

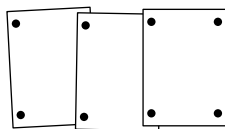
(D) 7

(E) 8

**Section B** (Correct – 4 points | Unanswered – 0 points | Wrong – deduct 1 point)

**Question 9**

Linda pinned up 3 photos in a row on a board using 8 pins as shown below.

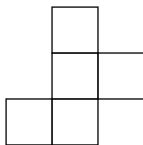


Peter wants to pin up 7 photos in the same way. How many pins does he need?

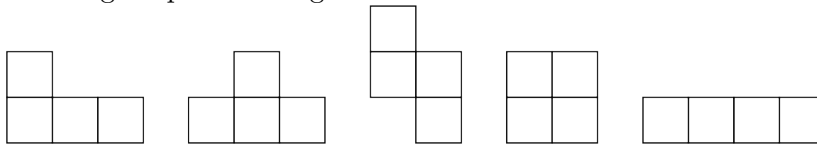
- (A) 14                      (B) 16                      (C) 18                      (D) 22                      (E) 26

**Question 10**

Dennis wants to remove one square from the the following shape:



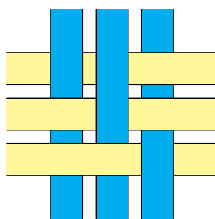
How many of the following shapes can he get?



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

**Question 11**

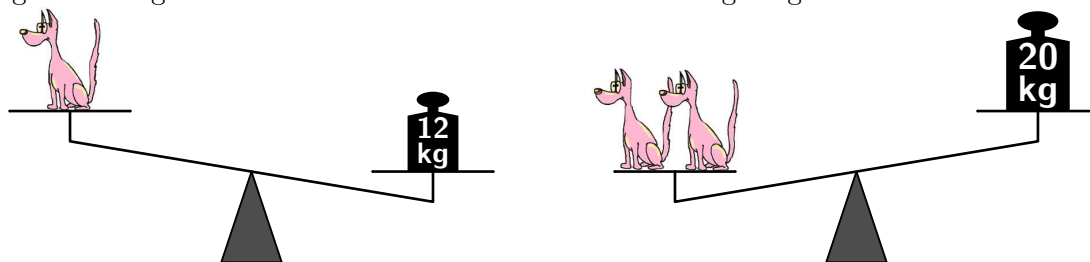
Six strips are woven into a pattern as shown below. What do you see when you look at it from the other side?



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

**Question 12**

The weight of a dog is a whole number. How much does one dog weigh?



- (A) 7 kg      (B) 8 kg      (C) 9 kg      (D) 10 kg      (E) 11 kg

**Question 13**

Sara has 16 blue marbles. She can trade marbles in two ways:

- 3 blue marbles for 1 red marble
- 2 red marbles for 5 green marbles

What is the largest possible number of green marbles she can get?

- (A) 5      (B) 10      (C) 13      (D) 15      (E) 20

**Question 14**

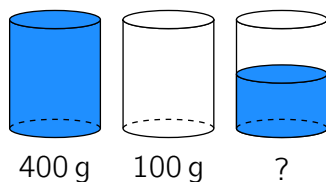
Steven wants to write each of the digits 2, 0, 1 and 9 in one of the boxes shown below. He wants to get the largest possible sum. Which digit should replace the question mark?

$$\square \square \square + \square ?$$

- (A) Either 0 or 1    (B) Either 0 or 2    (C) Only 0      (D) Only 1      (E) Only 2

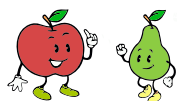
**Question 15**

A full glass of water weighs 400 grams. An empty glass weighs 100 grams. How many grams does a half-full glass of water weigh?

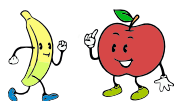


- (A) 150      (B) 200      (C) 225      (D) 250      (E) 300

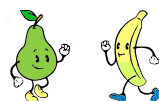
**Question 16**



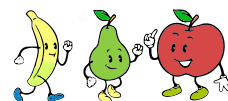
Together we cost 5 cents.



Together we cost 7 cents.



Together we cost 10 cents.



How much do we cost together?

- (A) 8 cents      (B) 9 cents      (C) 10 cents      (D) 11 cents      (E) 12 cents

**Section C** (Correct – 5 points | Unanswered – 0 points | Wrong – deduct 1 point)

**Question 17**

In the picture below, each shape stands for a different number. The sum of the three numbers in each row is shown on the right of the row.

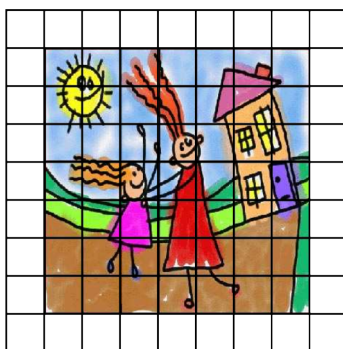
			15
			12
			16

Which number does the stand for?

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

**Question 18**

Anna used 32 white squares to frame a 7 by 7 picture as shown below. How many white squares does she need to frame a 10 by 10 picture?



- (A) 36      (B) 40      (C) 44      (D) 48      (E) 52

**Question 19**

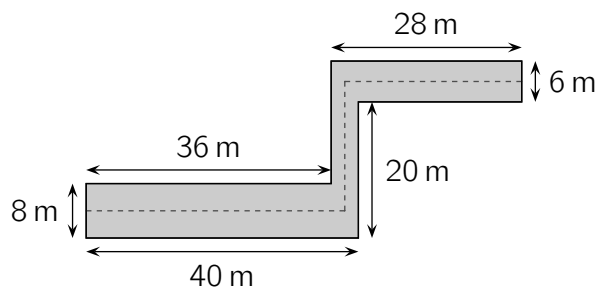
The pages of a book are numbered 1, 2, 3, 4, 5 and so on. The digit 5 appears exactly 16 times. What is the largest number of pages the book could have?

- (A) 49      (B) 64      (C) 66      (D) 74      (E) 80



**Question 20**

A hallway has the dimensions shown in the picture. A cat walks on the dashed line along the middle of the hallway.



How many metres does the cat walk?

- (A) 63                      (B) 68                      (C) 69                      (D) 71                      (E) 83

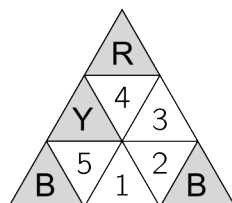
**Question 21**

In a park, there are 15 animals: cows, cats and kangaroos. Exactly 10 animals are not cows and exactly 8 are not cats. How many kangaroos are there in the park?

- (A) 2                      (B) 3                      (C) 4                      (D) 8                      (E) 10

**Question 22**

Mary has 9 small triangles: 3 of them are red (R), 3 are yellow (Y), and 3 are blue (B). She forms a big triangle (as shown below) by using the 9 small triangles so that any two triangles with common edge are different colours.



Which of the following statements is true?

- (A) 1 is yellow and 3 is red                      (B) 1 is blue and 2 is blue                      (C) 1 and 3 are red  
 (D) 5 is red and 2 is blue                      (E) 1 and 3 are yellow

**Question 23**

One of five children Alek, Bartek, Czarek, Darek and Edek has eaten a cookie.

Alek says: "I haven't eaten the cookie."

Bartek says: "I have eaten the cookie."

Czarek says: "Edek hasn't eaten the cookie."

Darek says: "I haven't eaten the cookie."

Edek says: "Alek has eaten the cookie."

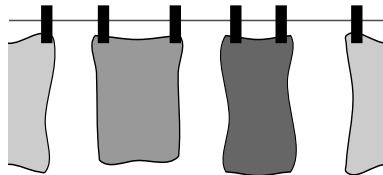
Only one child lies. Who has eaten the cookie?

- (A) Alek            (B) Bartek            (C) Czarek            (D) Darek            (E) Edek

**Question 24**

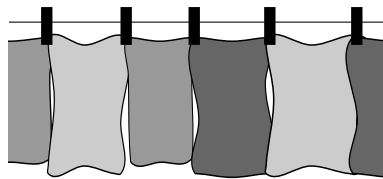
Emil started to hang up towels using two pegs for each towel as shown in figure 1.

figure 1



He realised that he doesn't have enough pegs and continued to hang up the remaining towels as shown in figure 2.

figure 2



In total, he hung up 35 towels and used 58 pegs. How many towels did Emil hang up in the way shown in figure 1?

- (A) 12            (B) 13            (C) 21            (D) 22            (E) 23

# **Rough Working**

