Singapore Math Kangaroo Contest 2019

Primary 1 / Grade 1 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

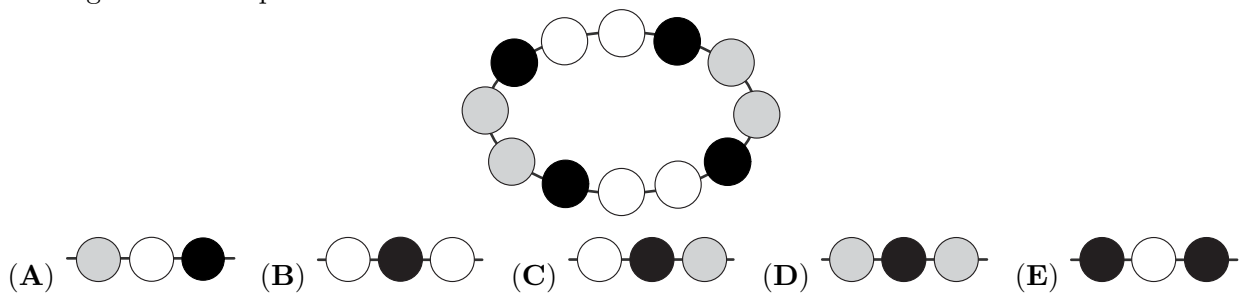**Section A** (Correct – 3 points | Unanswered – 0 points | Wrong – deduct 1 point)

Question 1
Which cloud only contains the numbers less than 7?

(**A**) 6 1 8 7   (**B**) 2 3 5 9   (**C**) 2 4 6 7   (**D**) 3 2 1 5   (**E**) 8 10 9 7
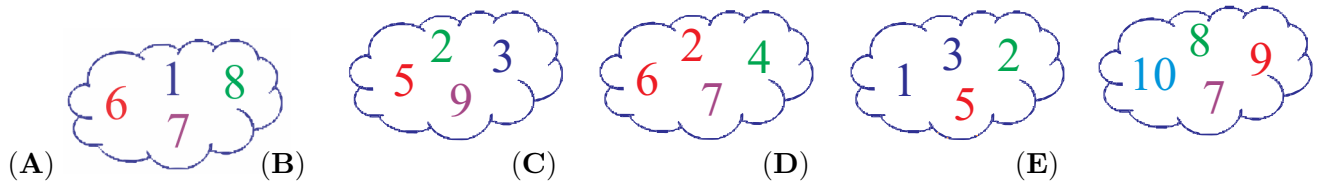
Question 2
Which figure shows a part of the necklace?
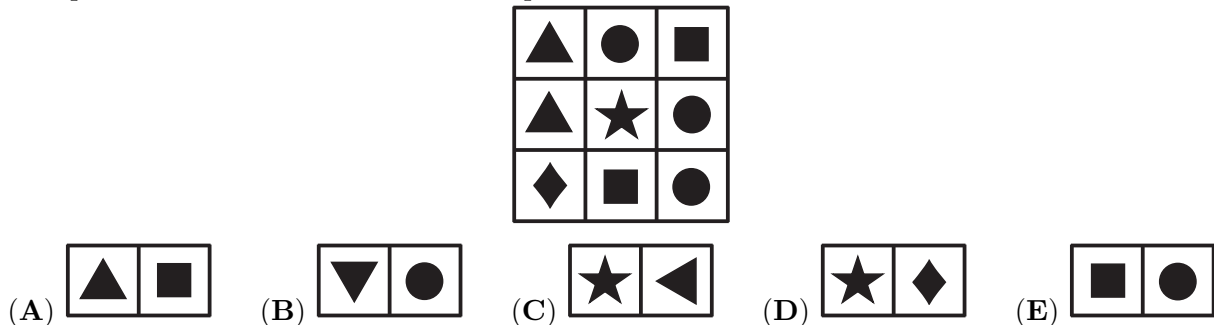
(**A**)   (**B**)   (**C**)   (**D**)   (**E**)

Question 3
Together, mum Kangaroo and her son Jumper weigh 60 kilograms. Mum Kangaroo alone weighs 52 kilograms. How much does Jumper weigh?

(**A**) 2 kilograms   (**B**) 4 kilograms   (**C**) 8 kilograms   (**D**) 30 kilograms   (**E**) 46 kilograms

Question 4
Which piece can Karen cut out from the square below?

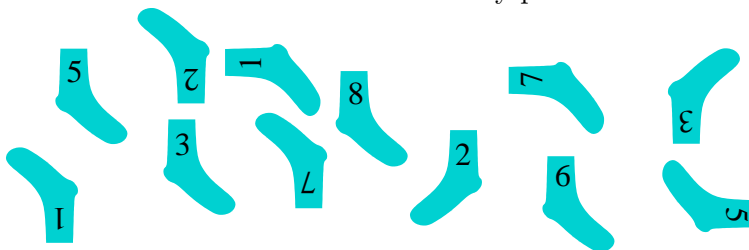(**A**)   (**B**)   (**C**)   (**D**)   (**E**)

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Question 5

At the entrance of a zoo, there are 12 children in the queue. Lucy is the 7th from the front and Kim is the second from the back. How many children are there between Lucy and Kim in the queue?

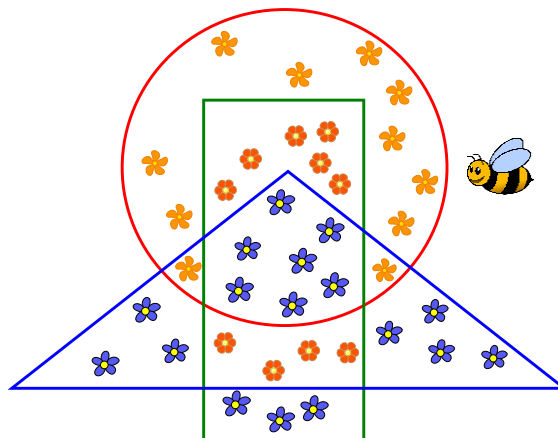(**A**) 2   (**B**) 3   (**C**) 4   (**D**) 5   (**E**) 6

Question 6

Jorge pairs his socks so that the numbers match. How many pairs can he make?

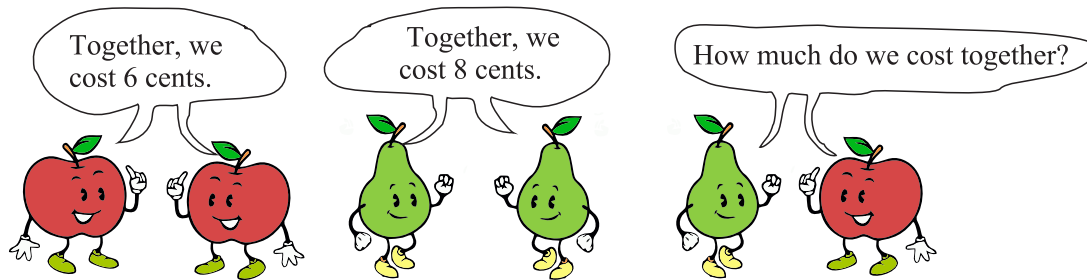(**A**) 3   (**B**) 4   (**C**) 5   (**D**) 6   (**E**) 8

Question 7

Maya Bee visited all the flowers that lie inside the rectangle, but outside the triangle. How many flowers did Maya visit?

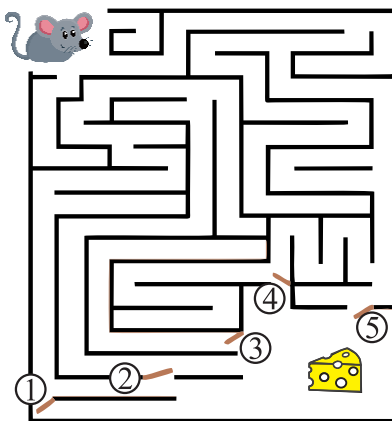(**A**) 9   (**B**) 10   (**C**) 13   (**D**) 17   (**E**) 20

Question 8

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

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

Question 9

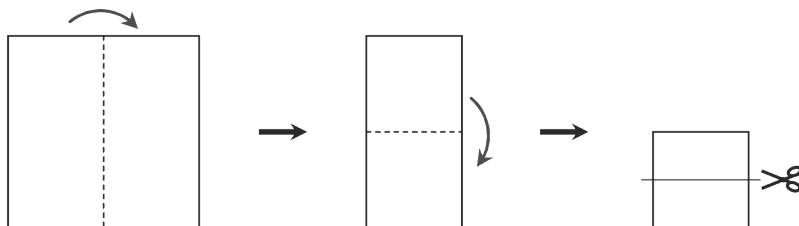You have to close two of the five gates so that the mouse cannot reach the cheese.

Which gates should you close?

(**A**) 1 and 2   (**B**) 2 and 3   (**C**) 3 and 4   (**D**) 3 and 5   (**E**) 4 and 5
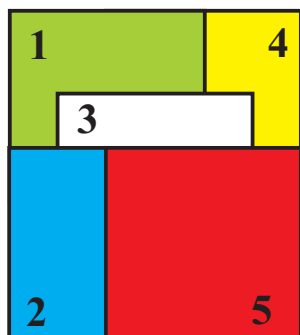
Question 10

Patricia folds a sheet of paper twice and then cuts it as shown below. How many pieces of paper does she end up with?

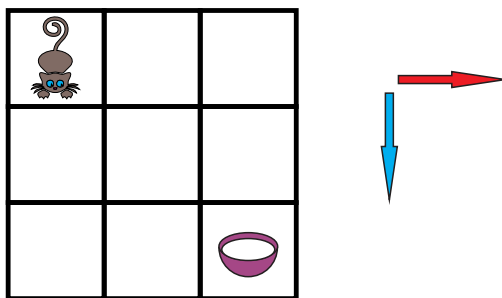(**A**) 2   (**B**) 3   (**C**) 4   (**D**) 5   (**E**) 6

Question 11

Five square cards numbered from 1 to 5 are placed on top of each other as shown below. The cards are removed one by one starting from the top. In what order are the cards removed?

(**A**) 5-2-3-1-4   (**B**) 5-2-3-4-1   (**C**) 4-5-2-3-1   (**D**) 5-3-2-1-4   (**E**) 1-2-3-4-5
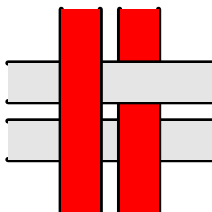
Question 12

The cat can only move in the directions shown by the arrows below. How many ways can the cat reach the milk?

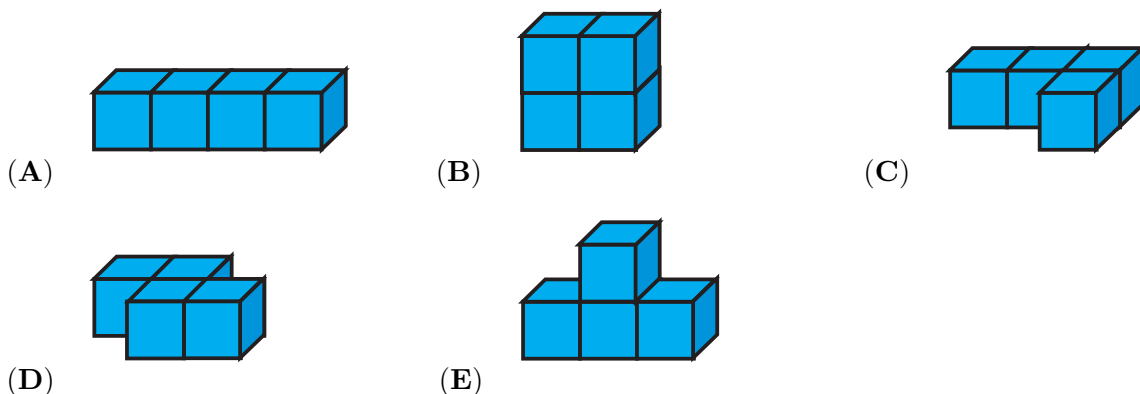(**A**) 2   (**B**) 3   (**C**) 4   (**D**) 5   (**E**) 6

Question 13

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

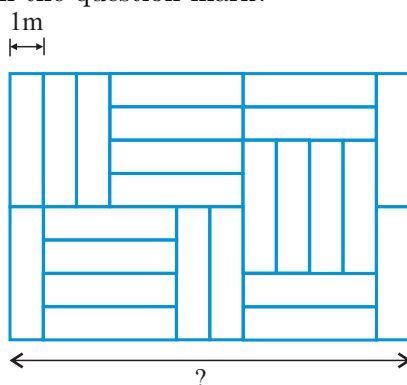(**A**)   (**B**)   (**C**)   (**D**)   (**E**)

Question 14

Each figure below is made up of 4 identical cubes. The figures are to be painted. Which figure has the smallest area to be painted?

(**A**)　　　　　　　　(**B**)　　　　　　　　(**C**)

(**D**)　　　　　　　　(**E**)

Question 15

A floor is covered with identical rectangular tiles as shown below. The shorter side of each tile is 1 m. What is the length of the side with the question mark?

1m

?

(**A**) 6 m　　　　(**B**) 8 m　　　　(**C**) 10 m　　　　(**D**) 11 m　　　　(**E**) 12 m

Question 16

A train from Kang station to Aroo station leaves at 6:00 AM and passes the other three stations on the way, without stopping. Each number in the picture shows the travelling time (in hours) between two stations. The train arrives at Aroo station at 11:00 PM on the same day. What is the travelling time between Aroo station and the previous one?

KANG　　　　　　　　　　　　　　　　　　　　AROO

2　　　　3　　　　7　　　　?

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

Section C (Correct – 5 points | Unanswered – 0 points | Wrong – deduct 1 point)
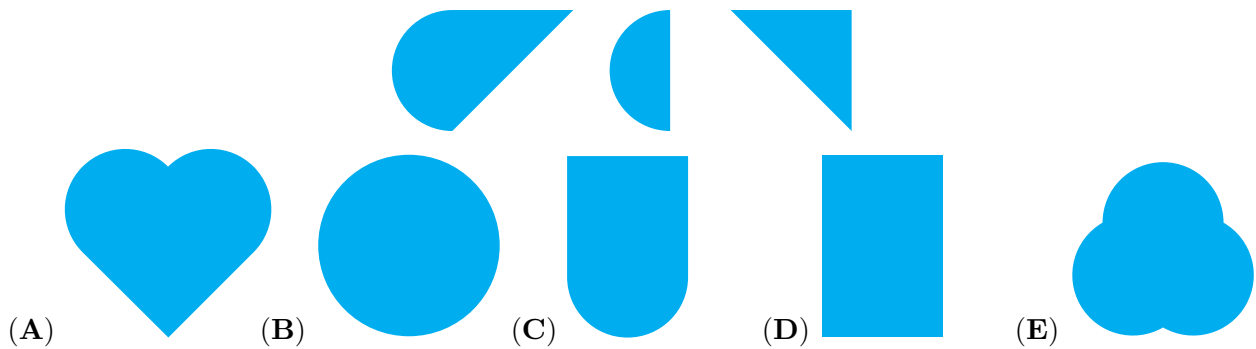
Question 17
On a farm, there are only sheep and cows. The number of sheep is 8 more than the number of cows. The number of cows is half the number of sheep. How many animals are on the farm?

(**A**) 16   (**B**) 18   (**C**) 20   (**D**) 24   (**E**) 28

Question 18
Which figure can be cut into the 3 pieces shown below?

(**A**)   (**B**)   (**C**)   (**D**)   (**E**)

Question 19
There are 10 camels in a zoo. The camels are either bactrian (with two humps) or dromedary (with one hump). If there are 14 humps in total, find the number of bactrian camels in the zoo.

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

Question 20
Three squirrels Anni, Betty and Elli collected 7 nuts in total. Each collected a different number of nuts, but each collected at least one. Anni collected the least number of nuts and Betty the most. How many nuts did Elli collect?

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

Question 21

Tim and Tom built a sandcastle and decorated it with a flag. They stuck half of the flagpole into the highest point of the castle. The upper tip of the flagpole was 80 cm above the ground, the lower tip was 20 cm above the ground. What is the height of the sandcastle?
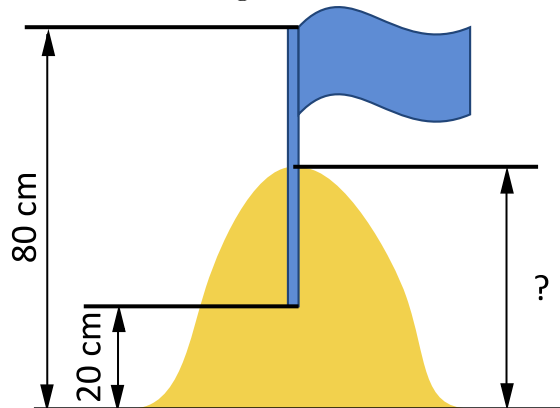
(**A**) 40 cm   (**B**) 45 cm   (**C**) 50 cm   (**D**) 55 cm   (**E**) 60 cm

Question 22

In the picture below, Ani replaced all the black squares with white ones. Then Bob replaced all the grey squares with black ones. Finally, Chris replaced all the white squares with grey ones. What did they get in the end?

(**A**)

(**B**)

(**C**)

(**D**)

(**E**)

Question 23

In the table below, Peter chose 2 squares with exactly four numbers in each. The sum of the four numbers in each chosen square is greater than 63. Which of the following numbers must be in both squares?

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20

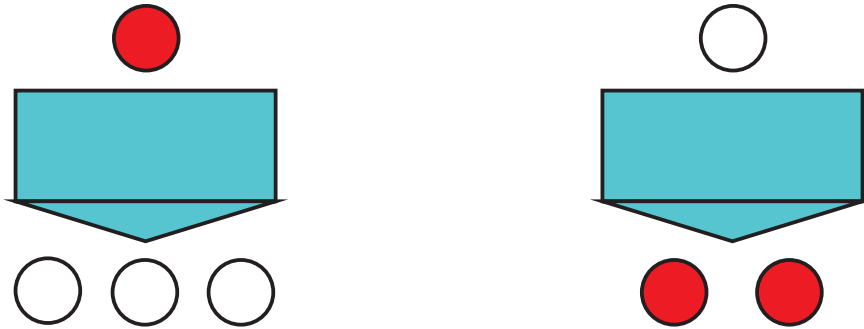(**A**) 14   (**B**) 15   (**C**) 17   (**D**) 18   (**E**) 20

Question 24

Amalia's machine converts one grey token into three white tokens and one white token into two grey tokens as shown below. Amalia has three grey tokens and one white token. She uses the machine three times. What is the smallest number of tokens she can end up with?

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

Rough Working