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.

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
Leonie has 10 rubber stamps. Each stamp has one of the digits: 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9. She prints the date of the Kangaroo contest as shown below. How many stamps does she use?

\[1 \quad 5 \quad 0 \quad 3 \quad 2 \quad 0 \quad 1 \quad 8\]

(A) 5  (B) 6  (C) 7  (D) 9  (E) 10

Question 2
The picture shows 3 flying arrows and 9 fixed balloons. When an arrow hits a balloon, it bursts, and the arrow flies further in the same direction. How many balloons will be hit by the arrows?

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

Question 3
Susan is 6 years old. Her sister is one year younger and her brother is one year older. What is the sum of the ages of the three siblings?

(A) 10  (B) 15  (C) 18  (D) 21  (E) 30

Question 4
The picture shows five screws in a block. Among the 5 screws, only 1 of them is shorter than the other 4 screws. Which screw is the shortest?

(A) 1  (B) 2  (C) 3  (D) 4  (E) 5
Question 5
The picture of the ladybird is shown below. Which option is not the same ladybird?

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

Question 6
Lucy folds a sheet of paper in half. Then she cuts a piece out of it as shown in the picture below. What will she see when she unfolds the paper?

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

Question 7
In her first try, Diana scores 12 points in total with three arrows. On her second try she scores 15 points. How much points does she score on her third try?

(A) 18  
(B) 19  
(C) 20  
(D) 21  
(E) 22  

Question 8
Mike sets the table for 8 guests as shown in the picture below. He wants to serve each guest with the correct arrangement, which means a fork on the left of each plate and a knife on the right. How many guest will have the correct arrangement?

(A) 5  
(B) 4  
(C) 6  
(D) 2  
(E) 3
Section B  (Correct – 4 points | Unanswered – 0 points | Wrong – deduct 1 point)

Question 9
Roberto makes designs using tiles like this [image]. How many of the 5 designs can he make?

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

Question 10
Albert fills the grid below with five figures. Each figure appears exactly once in every column and every row. Which figure must Albert put in the square with the question mark?

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

Question 11
Tom wants to cover the boat completely using the 2 types of shapes, a square and a trapezium as shown in the picture below. If no shapes can overlap each other, what is the least number of square and trapezium pieces does Tom needs to cover the boat completely?

(A) 5  (B) 6  (C) 7  (D) 8  (E) 9
Question 12
The colours in the picture below are inverted. Then the picture was rotated. What does the new picture look like?

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

Question 13
A rabbit has 20 carrots. It eats 2 carrots every day. If it ate the 12th carrot on Wednesday, which day did the rabbit start eating the carrots?

(A) Monday  (B) Tuesday  (C) Wednesday  (D) Thursday  (E) Friday

Question 14
Toby glues 10 cubes together to make the structure shown below. He paints the surface of the structure, including the bottom. How many cubes are painted on exactly 4 faces painted?

(A) 6  (B) 7  (C) 8  (D) 9  (E) 10

Question 15
There are 8 flowers on a rose bush. There are no more than one insect per flower. More than half of the flowers are occupied. The number of butterflies on the flowers is twice the number of dragonflies on the flowers. How many butterflies are on the flowers?

(A) 2  (B) 3  (C) 4  (D) 5  (E) 6
Question 16
Captain Kook wants to sail from the island called Easter through every island on the map and back to Easter. The total journey is 100 km long. Some of the distances between each island have been written in the picture as shown below. For example, the distance between Easter Island and Volcano Island is 17 km. The distance between Desert Island and Lake Island is the same as the distance between Easter Island and Flower Island through Volcano Island. What is the distance between Easter Island and Lake Island?

(A) 17 km  (B) 23 km  (C) 26 km  (D) 33 km  (E) 35 km

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

Question 17
The rooms in Kanga’s house are numbered from 1 to 14. Baby Roo enters the main door as indicated by the arrow show in the picture below. He passes through some rooms before leaving the house in one of the doors labeled A, B, C, D and E. The numbers of the rooms that he visits are always increasing. Through which door does he leave the house?

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

Question 18
Four balls each weigh 10, 20, 30 and 40. Which ball weighs 30?

(A) A  (B) B  (C) C  (D) D  (E) It could be A or B
**Question 19**
The band shown in the drawing can be fastened in five ways. How much longer is the band fastened in one hole than the band fastened in all five holes?

![Unfastened band](image)

![Band fastened in one hole](image)

(A) 4 cm  (B) 8 cm  (C) 10 cm  (D) 16 cm  (E) 20 cm

**Question 20**

In an ancient language the symbols represent the following numbers 1, 2, 3, 4, and 5. Nobody knows which symbol represents which number.

We know that:

\[
\text{Atom} + \text{Sun} = \text{Eye} \quad \text{Sun} + \text{Atom} = \text{Eye} \quad \text{Sun} + \text{Eye} = \text{Grass}
\]

Which symbol represents the number 3?

(A) Eye  (B) Sun  (C) Atom  (D) Grass  (E) Fish

**Question 21**

The stained glass tile is flipped. One of the flips is shown. What does the stained glass tile look like at the far right of the figure shown below?

![Stained glass tile](image)

(A)  (B)  (C)  (D)  (E)
Question 22
The large rectangle is made up of different sized squares as shown in the picture below. The 3 small squares each have an area of 1. What is the area of the large rectangle?

\[ \text{(A)} \ 165 \quad \text{(B)} \ 176 \quad \text{(C)} \ 187 \quad \text{(D)} \ 198 \quad \text{(E)} \ 200 \]

Question 23
Loes wants to write the numbers from 1 to 7 in the boxes shown below. Two consecutive numbers cannot be written in two neighbouring boxes. Neighbouring boxes share a common side. What numbers can she write in the box marked with a question mark?

\[ \text{(A)} \ \text{all seven numbers} \quad \text{(B)} \ \text{only odd numbers} \quad \text{(C)} \ \text{only even numbers} \quad \text{(D)} \ \text{only number 4} \quad \text{(E)} \ \text{only the numbers 1 or 7} \]

Question 24
To defeat a dragon Mathias has to cut off all the dragon’s heads. If he can cut off 3 dragon’s heads, one new head immediately grows. Mathias defeats the dragon by cutting off 13 heads in total. How many heads did the dragon have in the beginning?

\[ \text{(A)} \ 8 \quad \text{(B)} \ 9 \quad \text{(C)} \ 10 \quad \text{(D)} \ 11 \quad \text{(E)} \ 12 \]
Rough Working