Rules and Regulations
L1 Competition #1

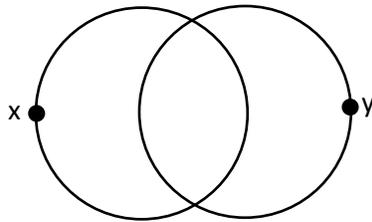## (Please read these rules and regulations carefully)

1. Please fill in your FULL name, grade, campus and student ID clearly on the answer sheet, and on the top of this page.

2. Do not open the question booklet until you are told to do so. You may only use a pencil when answering the questions.

3. No calculators or unauthorised electronic devices (including mobile phones) are allowed during the contest.

4. Strict silence must be observed at all times in the examination hall and please be reminded that you MAY NOT leave your seat without permission.

5. If you have any request or enquiry, please raise your hand and wait for an invigilator.

6. Only one candidate is allowed to leave the hall at a time. You are required to return to the hall within 10 minutes or else you will automatically be disqualified from the contest.

7. Each question in the contest has been verified by experienced trainers, thus no further explanation will be given.

8. The time allowed for the paper is 45 minutes. You must stop writing when you are told to do so.

9. You MUST fill in your answer in the answer sheet provided as you walked into the contest room. You will not be awarded marks for any answer written in the question booklet.

Scoring System

1. The correct answers to problems 1 to 10 will be awarded 1 point each. The correct answers to problems 11 to 15 will be awarded 2 points each. The total number of marks is 20 points. You will not be penalized for each incorrect answer.

2. The organizer reserves the right to call for a re-sit in the event of malpractice and to differentiate between those outstanding students.

3. Contestants who are disqualified from the contest will not be awarded any certificates and will be forfeited any right to re-sit this year.

Questions 1-10 consist of 1 point each

1. A farmer has 150m of fence and wants to cover the largest area possible. What shape will cover the largest area?
   a) Square   b) Triangle   c) Circle   d) hexagon

2. Molly is 36 years old, and her daughter is 6 years old. In how many years will Molly be three times older than her daughter?
   a) 8   b) 9   c) 10   d) 11

3. How many ways are there to get from x to y without retracing your path. Crossing your path is allowed.
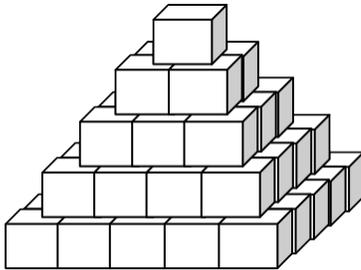

   a) 8   b) 9   c) 10   d) 11

4. Bob, Joe, Mary, and Anne wrote the WMO contest. If the first place person received $6, second place $2, and 3rd and 4th received $1 each, how many different ways could the prizes be distributed?
   a) 10   b) 12   c) 14   d) 16

5. Billy has organized his toys into 5 groups of 9. If Billy wants to re-arrange them into groups of 3, how many groups will he have?
   a) 45   b) 27   c) 15   d) 12

6. Christmas lights are strung around a house in the sequence starting with red, then white, and then green. If this sequence is repeated around the entire house, what colour is the 103rd light bulb?
   a) Red   b) White   c) Green

7. If an orange is given two vertical parallel cuts, and two more parallel cuts that are perpendicular to the original two cuts, how many pieces are there?
   a) 4   b) 9   c) 16   d) 25

8. A barn full of horses and chickens has a total of 28 legs and 10 heads. How many are horses and how many are chickens?
   a) 4 horses and 6 chickens   b) 6 horses and 4 chickens   c) 10 horses and 10 chickens

d) 5 of each

9. At Mr. Poodle Doodle Pet Store the puppies drink 64 litres of milk in one hour. The kittens take three times as long to drink the same amount of milk. How long would it take the kittens and puppies together to drink 64 litres?
a) 45 min.   b) 90 min.   c) 60 min.   d) 120 min.

10. Isaac is thinking about a number between 130 and 170. His number is divisible by 3, 5 and 11. What is his number?
a) 112   b) 133   c) 155   d) 165

Questions 11-15 consist of 2 points each

11. Betty has two sets of cards. First set is numbered from 36 to 52, and the second set is numbered from 12 to 45. How many cards does she that that are not repeated?
a) 31 b) 41   c) 32   d) 42

12. If another layer was added to the bottom of this diagram, how many blocks would be needed for the new layer?

a) 30 b) 35   c) 36   d) 40

13. If a pair of shoes that regularly sell for $25 are given a 20% discount. What is the final price after a 15% tax?
a) $17 b) $23   c) $20   d) $5

14. If a can has a volume of 60 cm³ and is filled with water to two-thirds full, and a metal ball with volume 30cm³ is dropped into the water. How much water has spilled?
a) None b) 10cm³   c) 30cm³   d) 90cm³

15. If a black right angled triangle is placed inside a white right angled triangle. The white triangle has a height of 12cm, and the base if 9cm. If the ratio of the area of the black to white triangle is 2:3, what is the area of the black triangle?
a) 48cm²   b) 32cm²   c) 36cm²   d) 30cm²