Rules and Regulations
L2 Competition #2

(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 14 will be awarded 2 points each. The total number of marks is 18 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.

1 points per question

1. Hal has a positive secret number. He performs a sequence of operations with his secret number. He triples the number, subtracts 5, divides by 4, adds 3 and squares the result to get 49. What is Hal's secret number?
   a) 6 b) 7 c) 8 d) 9

2. Which one of the answers is right in the middle of $\frac{1}{5}$ and $\frac{1}{25}$
   a) $\frac{3}{10}$ b) $\frac{3}{25}$ c) $\frac{6}{25}$ d) $\frac{7}{15}$

3. If Θ = 8 and Ɣ = 4, what is the value of the expression 2 x Θ – 4 x Ɣ?
   a) 0 b) 24 c) 36 d) 48

4. The population of frogs and spiders vary periodically. Frogs reach it's maximum population every 6 years, and spiders reach it's maximum population every 9 years. When will both frogs and spiders be at their maximum population together?
   a) 6 years b) 18 years c) 54 years d) 72 years

5. $\frac{1}{1+\frac{1}{3+\frac{1}{3}}} =$
   a) $\frac{10}{13}$ b) $\frac{1}{3}$ c) $\frac{13}{10}$ d) $\frac{1}{6}$

6. Jimmy has 8 socks in his drawer, 2 are red, 2 are green, and 4 are white. If he randomly takes out 4 socks, what is the probability of taking 4 white socks?
   a) $\frac{1}{70}$ b) $\frac{1}{4}$ c) $\frac{1}{6}$ d) $\frac{1}{2}$

7. On a trip a bus travelled 60km in 1.5 hours, then it stopped in traffic for 30 minutes, then travelled another 80km for the next 2 hours. What was the bus's average speed?
   a) 35km/hr b) 40km/hr c) 70km/hr d) 140km/hr

8. What is the smallest difference that can be formed between two numbers chosen from the set: {-15, -5, 0, 1, 5, 10}
   a) -10 b)-5 c) 0 d) 1

9. A pail full with water weighs 440 grams. When it is two thirds full of water it weighs 300 grams, what is the weight of the empty pail in grams?
   a) 10 b) 20 c) 60 d) 100

10. Zorain noticed that the odometer on his car is slow. For a 250km trip the odometer only records 210km. If Zorain's odometer indicates that he has driven 420km, how far has he actually gone?
    a) 450km b) 460 c) 480km d) 500km

2 points per question

11. Toni goes to a department store and buys two shirts marked the same price. She pays full price for the first shirt but gets a 30% discount on the second shirt. If she pays a total of $34.51 for the two shirts, how much did she pay for the second shirt?
    a) $14.21 b) $20.30 c) $17 d) $17.25

12. The five tires of a car (four road tires and a full-sized spare) were rotated so that each tire was used the same number of kilometres during the first 30,000km the car travelled. For how many kilometres was each tire used?
    a) 6,000km b) 7,500km c) 24,000km d) 30,000km

13. When four litres are added to a tank that is one-third full, the tank is then one-half full. The capacity of the tank is:
    a) 8L b) 12L c) 20L d) 24L

14. Square corners, 4 cm on a side, are removed from a 15cm by 20cm rectangular sheet of cardboard. The sides are then folded to form an open box. The surface area, in square cm, of the exterior of the box is:
    a) 300 b) 364 c) 236 d) 64cm