PiVerb Math Olympiad (PiMO)

Pi (Class 5 & 6) Sample paper:

1. Amit, Bharath, Chitra and Deepa are friends and one of them committed a crime. They made the following statements. If only one statement is true, find who is guilty:
    1. Amith: Bharath did it
    2. Bharath: Deepa did it
    3. Chithra: I did not do it
    4. Deepa: Bharath lied when he said I did it

2. When we write numbers from 1 to 100, how many times does the digit 3 get repeated?

3. What is the 200th digit of the number 122333444455555…

4. A six-digit number is a multiple of 77 and 143. If the 3rd digit of the number is 7, what will be the remainder when the number is divided by 10?

5. In a garden, there are 2 plants. One plant is 44cm tall and the other is 80 cm tall. The first plant grows by 3cm every 2 months and the second by 5 cm every 6 months. The number of months after which the 2 plants have equal height is _____?

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Tau (Class 7 & 8) Sample paper:

1. How many times does the number 2 appear in a book having page numbers 1 to 250?

2. Consider 5 integers a, b, c, d, and e. When added pair wise they yield sums {-1, 3, 5, 6, 6, 8, 9, 12, 13, 15}. Find the largest of the 5 integers.

3. The sum of the digits of a seven-digit odd natural number is 3. How many such numbers are possible?

4. A 2021-digit number is multiplied by 54. The last digit of the product is 2 and the second last digit is 4. If the same number is multiplied by 46, the last two digits are _____

5. I added all the positive integers from 1 to P and obtained a total of 2021. By mistake, I added a number twice. What is the correct total?