

External Math Circle Journal- 25/4/2022

Introduction

My name is Sharanyaa, and I study in Grade 5. On 25th April 2022, I taught my 1st Math Circle Session. The students who attended it were 3rd Graders from Swapnopuran Welfare Society (SWS). I taught five students. Out of the five students, three were not interactive. I am glad to say that the other two interacted well and asked a lot of questions. We discussed four questions. My students took their time in thinking and answering. Though they sometimes made mistakes, they were eager and friendly to correct them. I hope to teach them again!

Tools

The class was conducted on Google Meet. For the board, I used Power Point, pasting the questions prior class. I also added additional pictures, so that I can explain the problem well.

Problems

Question 1

In this square there are 9 dots. The distance between the points is always the same. You can draw a square by joining 4 points. How many different sizes can such squares have?

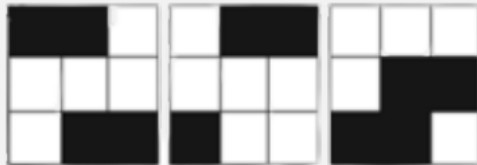


A) 0 B) 1 C) 2 D) 3 E) 4

This was the first question we solved. The squares were hidden in plain sight. I numbered the dots so that they can tell me which dots, when connected will form a square. They took their time and spotted the squares: the smallest square (made out of horizontal and vertical line segments), the medium square (made out of slanted lines) and the largest square (made out of horizontal and vertical line segments). The answer was 3.

Question 3

Some of the small squares on each of the square transparencies have been coloured black. If you slide the three transparencies on top of each other, without lifting them from the table, a new pattern can be seen. What is the maximum number of black squares which could be seen in the new pattern?



- A) 5 B) 6 C) 7 D) 8 E) 9

We solved this question next. I had skipped Question 2, hoping to return to it in the end of the session (we could not as the session finished before we could reach it). We used a table on the presentation with numbered squares to make it easier to solve. The students told me which squares to colour as I coloured the table. Then they counted the colored squares and told me the correct answer 8.

Question 4

Sarah bought three books. For the first book she paid half of her money plus 1 Euro more. For the second book she paid again half of her left-over money plus 2 Euro's more. For the third book she paid again half of her left-over money plus 3 Euro's more. After which she had spent all of her money. How much money did she have to begin with?

- (A) 45 (B) 36 (C) 34 (D) 33 (E) 30

This problem was probably the most difficult problem we dealt with. The students were not familiar with algebra, so we tried each option, and in the end we found out that 34 was the correct answer.

Question 5

Anna, Berta, Charlie, David and Elisa baked biscuits at the weekend. Anna baked 24, Berta 25, Charlie 26, David 27 and Elisa 28 biscuits. By the end of the weekend one of the children had twice as many, one 3 times, one 4 times, one 5 times and one 6 times as many biscuits as on Saturday. Who baked the most biscuits on Saturday?

- (A) Anna (B) Berta (C) Charlie (D) David (E) Elisa

This problem was a tricky problem. The students asked it to be explained again and again. We used multiplication tables to solve it. Once you got the technique to solve it, it became very easy. It took a lot of hints to get the students to find the technique to solve the problem, but they managed to solve it!

Experience

I enjoyed teaching the students a lot! The students tried to answer correctly. Even if they made any mistakes they eagerly tried to find the right answer. There were few technical issues, but the students enjoyed and understood all the problems. We spoke in Bangla, our mother tongue, which help in communicating a lot! It was a breathtaking experience which I will always remember: The first time I taught...