

Mental images

Paul Ernest, *Education Department, University of the West Indies*

Recently I picked up an interesting book at a jumble sale. Leafing through the pages I found a drawing by a student of his mental image of the number line. (*top left — opposite*)

Seeing the picture gave me a feeling something like *dejà vu*. I suddenly realised that I too have a mental image of a number line which I have been using for many years. I had never thought about this part of my mental baggage before. Suddenly becoming aware of it gave me a pleasurable shock of recognition. I hope some of you reading this will experience the same sensation.

My mental number line looks something like the top right diagram. The two marked points on the line are 186,000 and 240,000. These are the speed of light and the distance to the moon in pre-metric units and must date back to my childhood interest in space travel. These were the first large numbers with a meaning for me.

Having gained access to a hitherto sealed compartment in my mind I discovered other images.

Do you have mental images like these?

Do your friends, or the children you teach?

Number lines

Brenda Carter, *Duppas Junior School, Croydon*

The previous note on mental images was sent to the author who has supplied this account of some work by class 1E.

The arrival of the brief note on images of number-lines coincided with the need for my 'supply stint' with one of the fourth-year classes, so I decided to make the two matters serve each other. Hence the enclosed are the results of thirty minutes contact with more than thirty 11-year-olds.

The group viewed my arrival with trepidation and forthright queries.

"Are you going to make us work hard, Miss?"

The nil response created an apprehensive silence which ranged from a humorous glint in the eyes of half-a-dozen members who knew me well, to sullen indifference, verging on hostility, from the member recently placed on the suspension list of the Authority.

We started by talking about the first time anyone in the class had become aware of numbers. Very slowly, a few began to volunteer information.

"I can remember my first days at school. I held my Mum's hand to walk up the steps to the classroom and there were these pictures on the wall. One bird, two trains, three balls, four trees, five animals."

"My Dad made me count out any sweets before I got them."

"There were these things in front of my eyes in

my pram. My sister had them too. One blue big bead, two red ones and three yellow ones."

Gradually, more of the class responded with their own stories and I asked if they could remember counting or hearing numbers being counted.

"Oh yes, going upstairs with my Dad, we counted each step."

"My Mum counted out the knives and forks for me."

"My Auntie counted my toes in the bath."

"I counted my sister's sweets. She got more than me."

"There was this thing with rings on it and you pushed them over the bits of wire to drop on the other side."

We talked generally about being aware of numbers and our earliest memories of them.

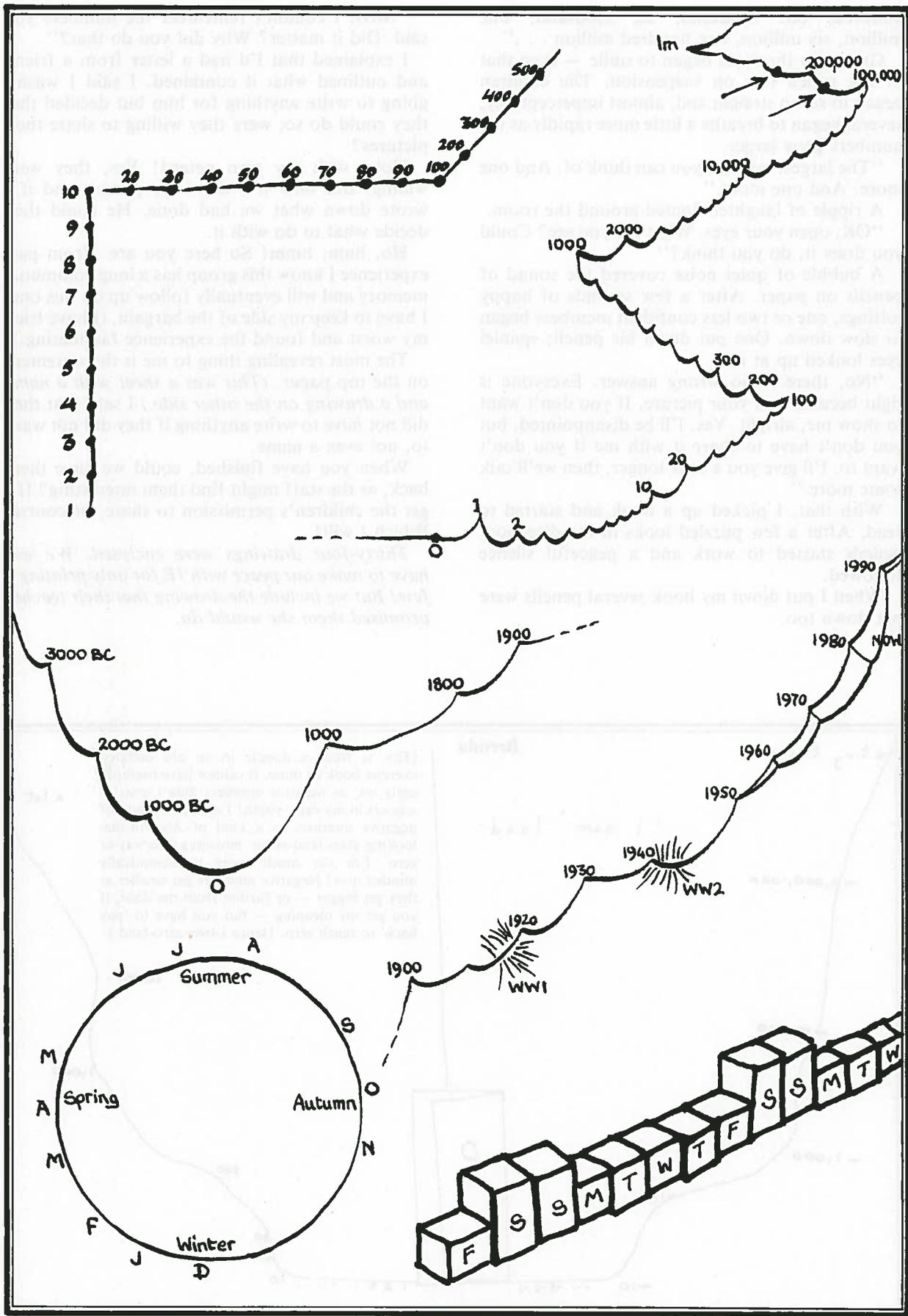
"When you count numbers, do you see them inside your head?" I asked.

"What d'yer mean?" came the response.

"Well, close your eyes for a while and then I'll say some numbers for you. Tell me what happens."

To my surprise all eyes closed and I could hear my watch tick away the time. I remember feeling peaceful and relaxed as I looked at the faces around me. They also were at rest, and yet expectant and very, very still.

"One, two, three, six, nine, ten, twenty, thirty, ninety, one hundred, two hundred . . . five



hundred, one thousand, six thousand, one million, six million, one hundred million . . .”

Gradually the faces began to smile — even that of the sullen one on suspension. The children began to sit up straight and, almost imperceptibly, several began to breathe a little more rapidly as the numbers grew larger.

“The largest number you can think of. And one more. And one more.”

A ripple of laughter floated around the room.

“OK, open your eyes. What did you see? Could you draw it, do you think?”

A bubble of quiet noise covered the sound of pencils on paper. After a few seconds of happy jottings, one or two less confident members began to slow down. One put down his pencil; spaniel eyes looked up at me.

“No, there is no *wrong* answer. Everyone is right because it is *your* picture. If you don’t want to show me, alright. Yes, I’ll be disappointed, but you don’t have to share it with me if you don’t want to. I’ll give you a little longer, then we’ll talk some more.”

With that, I picked up a book and started to read. After a few puzzled looks in my direction, pencils started to work and a peaceful silence followed.

When I put down my book several pencils were put down too.

“Miss, I couldn’t remember the numbers you said. Did it matter? Why did you do that?”

I explained that I’d had a letter from a friend and outlined what it contained. I said I wasn’t going to write anything for him but decided that they could do so; were they willing to share their pictures?

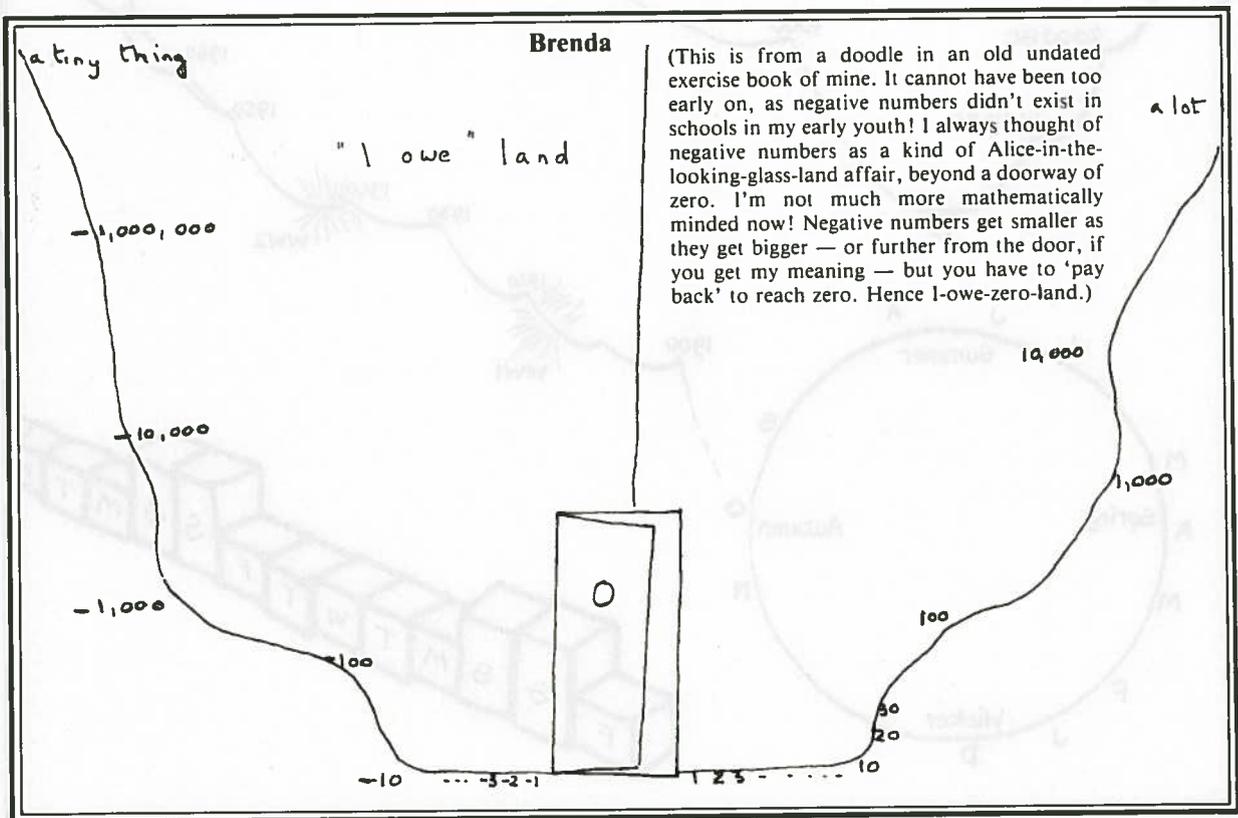
Hoist with my own petard! Yes, they were willing. *But* only if I drew my picture and if I wrote down what we had done. He could then decide what to do with it.

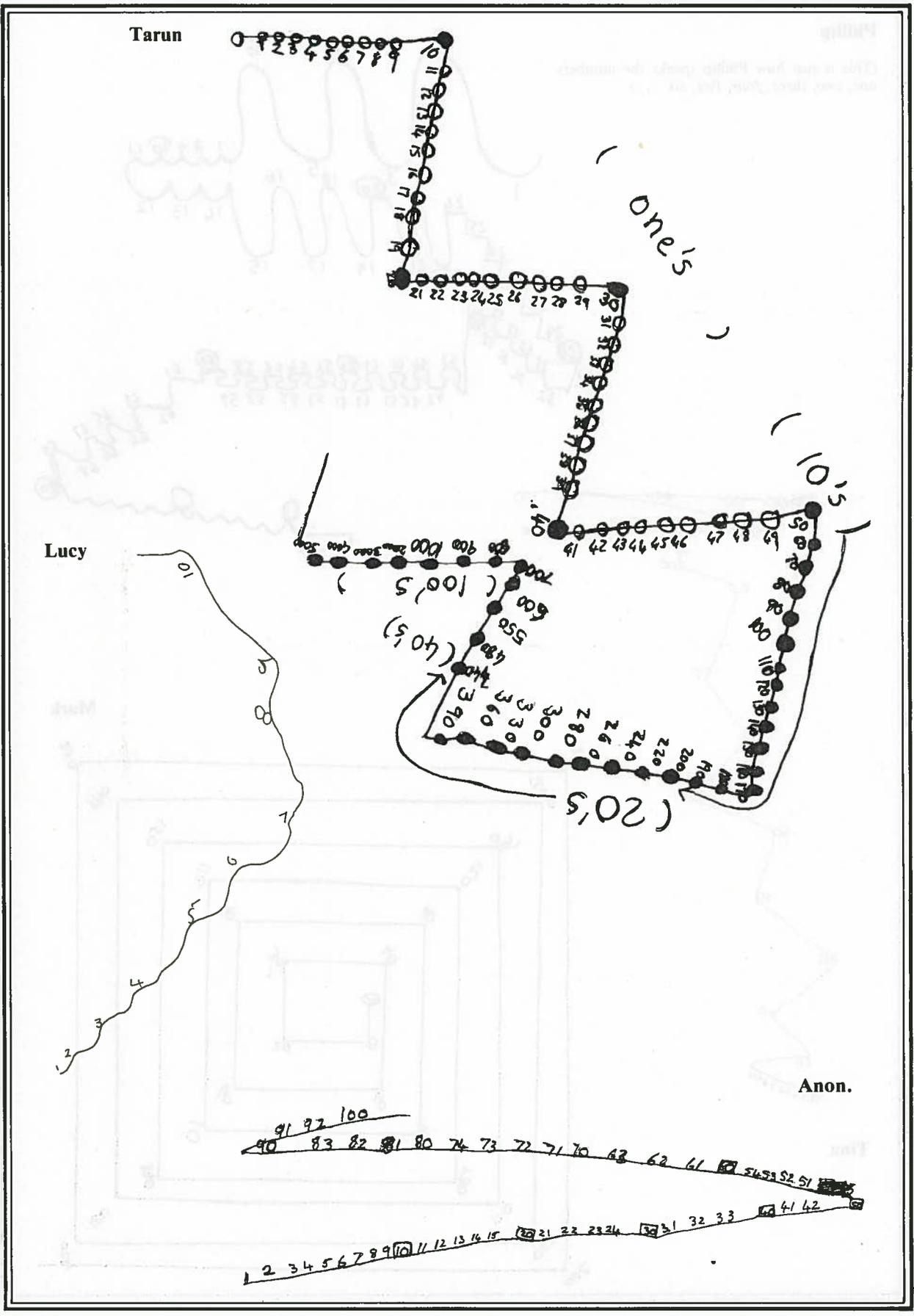
Ho, hum, hmm! So here you are. From past experience I know this group has a long communal memory and will eventually follow up on this one; I have to keep my side of the bargain. (I have tried my worst and found the experience fascinating.)

The most revealing thing to me is the statement on the top paper. (*This was a sheet with a name and a drawing on the other side.*) I said that they did not *have* to write anything if they did not want to, not even a name.

When you have finished, could we have them back, as the staff might find them interesting? If I get the children’s permission to share, of course. Which I will!

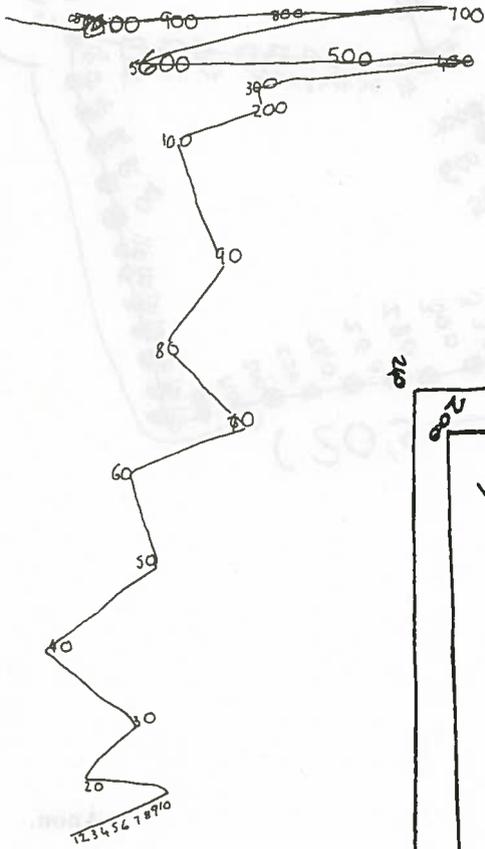
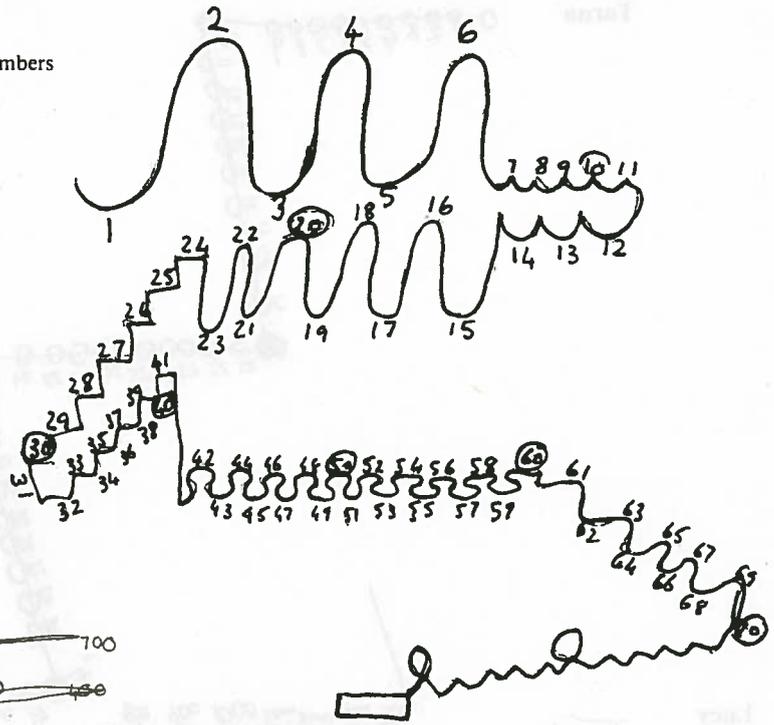
Thirty-four drawings were enclosed. We will have to make our peace with 1E for only printing a few! But we include the drawing that their teacher promised them she would do.



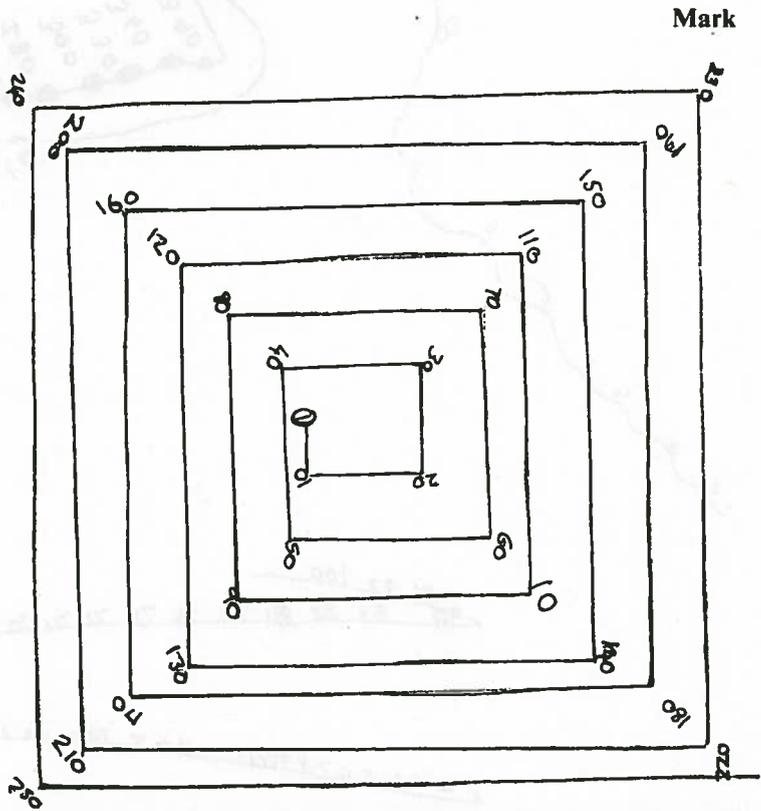


Phillip

(This is just how Phillip speaks the numbers one, two, three, four, five, six . . .)



Tina



Mark