

ODD ANGLES

THIRTY-THREE MATHEMATICAL ENTERTAINMENTS

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DOUBLEDAY & COMPANY, INC., GARDEN CITY, NEW YORK

1971

AN EXPLANATION OF THE FACT THAT
THERE HAVE BEEN VERY FEW . . . IN FACT . . .
VERY, VERY FEW LADY MATHEMATICIANS
THROUGHOUT THE HISTORY OF MATHEMATICS

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You may have heard it said that mathematics is a man's game . . . that for some reason or another, the ladies just can't handle this esoteric stuff. Try to find out why, though, and you usually receive unsatisfactory answers—vague remarks—suggestions that this is a stupid question, and so on.

But, as you know, much that we do today is based upon traditions of one kind or another that have their roots in that "dim antiquity" that people talk about. I have suspected (since many of my best math students have been gals) that this business of ladies and mathematics may go back to that same "dim antiquity." The recent discovery of fragments of the diary of a young lady in ancient Greece has brought evidence which supports my theory.

Here, then, is an excerpt from the diary of Zoe, daughter of Ariston of Athens . . .

Today I had a fun time over at old Plato's. I suppose I should be more respectful, but he is such a fuddy-duddy. Daddy decided that I should study mathematics, and this seemed like a good idea to me, since I got interested in what he and his friends were saying the other evening

about how the Egyptians built their pyramids and things like that.

So, since Daddy's got half the money in this town, he wrangled a deal with Plato for me to take lessons in mathematics. Today was my first, and, I'm afraid, my last lesson. Daddy's going to be upset when he hears, and I guess I am impertinent, but Plato's such a square. Poor Daddy, it's too bad he didn't have half a dozen boys, or at least one, instead of me.

Anyway, I went over to Plato's at the appointed hour. One of his slaves led me to the little garden where the old boy was sitting, half asleep it looked like to me, but the slave said he was thinking. I went up to him as cheerfully as possible and said, "Hi, Plato."

He sat up, scowled, and said, "I suppose you are Ariston's daughter," and, "You will call me 'Professor,' if you please."

Well, I didn't please, since everyone else seems to call him just "Plato." But I guessed I would humor him, so I agreed and sat on a low wall near the old boy, kicked off my sandals, and prepared to learn some mathematics.

Plato looked at me with obvious displeasure. "I am accustomed," he said, "to have my pupils sit at my feet."

I told him I didn't want to sit on the ground with all the bugs and I could hear just as well from where I was. He didn't seem very happy about this, and, after frowning quietly for a minute, said, "I have never attempted to instruct a female pupil before." The way he looked at me indicated that he had decided already that this was a waste of time.

But he began. "First I will tell you about the tools of the geometer, since geometry is the only mathematics worth considering." He called for a servant to bring out a couple

of gadgets he called compasses, and a piece of iron with a straight edge. "With this equipment," he intoned, "you can perform all the geometric constructions."

"What about the Delian Problem?" I asked, for that had fascinated me when Daddy and his friends talked about it.

"Silence, girl," the old boy scowled. (He's a great scowler.) "You are here to learn." Then he went on with the speech. "Now to bisect an angle, you first make marks with the compasses."

"But, Plato," I said, in my excitement forgetting all about calling him Professor, "why not just measure the angle with that little gadget the Egyptians used? Talos thinks they got the idea from the Sumerians many years ago."

"Silence!"—and this time he really roared. "What do those Egyptians know about geometry? They are technicians. They play with blocks . . . they . . . they . . ." And the way he sputtered and shook I thought he was going to have a heart attack. I sure shut up, and after a while he simmered down, and began again.

"Now, where was I? Yes, you then take this straightedge and place it across the points you marked with your compasses . . ."

But I had a great idea. "Look," I said, "why don't you make some marks on that piece of iron. You could mark it off evenly, and then measure with it like the Egyptians did with their knots in the rope . . ."

Gee, the old boy really blew his stack on that one. The slaves came running, and I decided I'd better eclipse myself, as the ancient Sumerians used to say. I grabbed my sandals and ran out.

Guess that's the end of my mathematics lessons. But, if

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you've got to do things in such stupid, inefficient ways, I don't think I want to study mathematics anyway.

I guess I'll have to tell Daddy, and then he's going to be mad.

Now, I'm not saying for sure that this started the whole business about women not being good at math. But Plato's ideas have carried a lot of weight, even down to the present . . . and, it's just possible . . .