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To the Parliamentary Education and Innovation Committee:

It has come to my attention that the Parliamentary Education and Innovation Committee is discussing the merits of the current assessment procedures for Maths B, in particular regarding (1) compulsory written assignments and (2) marking by tables of paragraphs.

As a professional mathematician I strongly oppose the current practices in (1) and (2). The understanding of mathematics is not at all helped by writing an essay on mathematics. Mathematics is best learned by solving many concrete problems, formulated in a simple way, such as: solve 2x + 5 = 0 for x or integrate x^2 from 0 to 1. Writing long essays on mathematical topics without fully understanding the details (which could become only available at university) can be very detrimental to the motivation of the student, especially the mathematically gifted student who enjoys solving abstract problems. Moreover, the assessment of the student's mathematical abilities is completely muddled by the complicated tables of paragraphs style imposed by the educational "experts". It is important to understand that the assessment of Mathematics is in a way much easier than that of English or History: either the answer to a concrete problem is correct or not. And if the answer is incorrect, it is easy to see by the teacher where things have gone wrong. Marking by adding up the scores to a set number of questions gives a very simple but accurate way to assess the mathematical knowledge of the student. It is the predominant mode of operation at any good university. The current emphasis on "woolly" mathematics (involving a lot of words) has significantly lowered the standard of the school leavers. I find that I have to reteach many concepts in first year that should have been well-understood by the students in high school.

I believe the committee has a great opportunity to make things simpler and better for the mathematics education in Queensland by removing these ill-advised measures. A good way to improve mathematics education is to involve the factual mathematician, by which I mean a person who enjoys teaching and researching mathematics (not a person who has studied how to teach mathematics or science). A good example is the *Mathematicians in Schools* program in which I and several of my colleagues at UQ are involved, and which has proven to be very successful in raising the standards of mathematics education.

I would welcome the opportunity to further state my case if this would benefit your deliberations.

Yours sincerely,

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