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Dear Alf,

Thank you very much for your letter of 18 February and for the two preprints which I am now studying with interest.

I hope that you can continue with your preparing of my collected works. When my old papers first appeared, they produced little interest in the mathematical world, and it was only in recent times that they have been rediscovered and found useful. So a collection of all my papers may repair this position!

If I were ten years younger, I should also try to learn handle big computers. But I have used only programmable calculators which I found very convenient. In the calculations for Squares to the base 3 I used mostly a TI 59 with printer and so could get my results. I have now also a H-P 28c calculator which works to 12 places. Unfortunately the manuals that come with this machine are far too short and badly arranged. So far I have not yet been able to construct on it a program which allows to express a given integer or real numbers to the base $g \geq 2$, something I could do on the TI 59.

The problem of the representation of squares to the base $g \geq 5$ seems quite hard, and I hope you have more success with it than I. It would be appropriate to consider the following more general problem.

"Let f(x) be a polynomial in x with integral coefficients which is positive for positive x. Study the integers x for which the representation of f(x) to the base $g \geq 3$ has only digits o or 1."

Here it may be sufficient to assume that the highest coefficient of f(x) is a power of g, and that f is of the second degree. For polynomials of the first degree we settled this problem in our joint paper.

With all good wishes,

Yours,

K. Mahler