Hardy gave himself a score of 25, Littlewood 30, Hilbert 80, and Ramanujan 100". As one whose score on the same scale is of the order $10^{-10^9}$, it would be presumptuous of me to venture an opinion. Fortunately, for an independent assessment, we are able to turn to Littlewood’s review of the Collected papers in the Gazette (Vol. 14, No. 200, April 1929) from which the following extract is quoted:

“Ramanujan’s great gift is a ‘formal’ one; he dealt in ‘formulae’... But the great day of formulae seems to be over. No one, if we are again to take the highest standpoint, seems able to discover a radically new type, though Ramanujan comes near it in his work on partition series; it is futile to multiply examples in the spheres of Cauchy’s theorem and elliptic function theory, and some general theory dominates, if in a less degree, every other field. A hundred years ago his powers would have had ample scope. Discoveries alter the general mathematical atmosphere and have very remote effects, and we are not prone to attach great weight to rediscoveries, however independent they seem. How much are we to allow for this; how great a mathematician might Ramanujan have been 100 or 150 years ago; what would have happened if he had come into touch with Euler at the right moment? How much does lack of education matter? Was it formulae or nothing, or did he develop in the direction he did only because of Carr’s book? ... Such are the questions Ramanujan raises.”

(The whole review, which is reprinted in Littlewood’s A mathematician’s miscellany (Methuen), is well worth reading.) Fifty years on, the ground of mathematical research has shifted dramatically, and the content of these notebooks seems even more remote. But one remains fascinated by the imagination which produced them, and we are grateful to Professor Berndt for bringing them again to our attention.

The author proposes to complete this task in three volumes: this first deals with the first 9 chapters of the “second notebook” and with the “quarterly reports” which Ramanujan wrote for the University of Madras in 1913–14. It is a pity that the whole work could not have been published at one time, and we must hope that the appearance of the two remaining parts will not be too long delayed.

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This is a three-volume anthology addressed to the general reader, not so much to answer the question “what is mathematics?” (though it does provide several answers to this), but more to consider “why should we care?”

Most of the essays and extracts have appeared elsewhere and most mathematical general readers will have met many before. The range is enormous, and my reactions spanned the complete spectrum from boredom to fascination. This is not necessarily a criticism—I suspect that most readers will experience the same when faced with such a rich variety. The only thing a reviewer can do in such circumstances is to give some indication of the content and flavour.

Volume 1 begins with a historical section, with essays on the mathematics of Egypt, Greece, Japan, the Muslim world, up to reminiscences of the Cambridge tripos, and a fascinating glimpse into the inner workings of Bourbaki by one of “his” members. The next section contains several mathematical lives, the more recent tending to be the more interesting possibly because I found nothing new about Newton, Hamilton, Gauss etc. On the other hand, more recent, often autobiographical essays were able to put real flesh onto names like Hasse, Ulam and von Neumann, but many were frustratingly brief. In the final part there are essays on the growth of concepts, important problems, an Archimedean dialogue on applications, the intuitionistic crisis, emotional perils of the mathematical life, the difference between mathematics and theoretical physics, what you can do with an axiom system etc.
Volume 2 begins with "the nature of mathematics" which seems to be rather an arbitrary classification or an unimaginative choice of title since most of the anthology fits under this heading. However, we find the meaning of mathematics, the rôle of intuition and of definitions, mathematics as a creative art and so on. The next section is entitled "real mathematics" and here we do actually do some. We have to think and work quite hard in Fermat's last theorem, $\pi$, e, number fields, non-Euclidean geometry, the Riemann hypothesis, the 4-colour theorem and the importance of group theory. Finally, "Foundations and Philosophy" discusses the nature of proof, are mathematics and logic identical? and uses analogies to render Gödel's theorems intelligible.

Computers first appear in their own right in volume 3, in which specific computational mathematics gets some exposure in algorithms and infinite loops, and there are essays on social issues and the relation, still uneasy, between computing and mathematics. This is followed by a section on mathematics in art and nature, including an article by Le Corbusier, then a section on statistics and maths in industry, more about the pure v. applied issue, and the final section is about sociology and education.

The editors have produced a collection which I suspect will be well used in libraries but it is harder to imagine individuals making the investment.

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Almost every interview is characterised by a refreshing degree of candour and there are plenty of revealing anecdotes, reminiscences and perspicacious philosophical, psychological and pedagogic insights which integrate to form a compelling picture of what the human enterprise called mathematics comprises, where it is heading, and what being a professional mathematician actually entails.

En route there is a mountain of thought-provoking comments on specific matters and I can do no better than whet the appetite with some aphoristic samples.

On computers: 'The computer is important, but not to mathematics.' (Halmos)
'The only human accomplishments that computers can't do well are things that people do without thinking.' (Knuth)
'You don't really know something until you have taught it to a computer.' (Knuth)

On applications: 'I try to link nearly all of my work with some real-world problem.' (Diaconis)
'There is a sense in which applied mathematics is just bad mathematics.' (Halmos)

On teaching: 'I don't think that one person is a good teacher for all students. There are all kinds of styles of learning and it takes a good teacher to teach in a style that is not the style in which he learns.' (Blackwell)
'There is no definitive characterisation of good teaching.' (Kline)
'Almost anyone can learn to be a good teacher.' (Kline)

Familiar and topical worries recur in several places: concern at the lack of young mathematicians choosing teaching as a career; laments for the decline of geometry in an age where the VDU screen has such a strong hold on our students, and some speculation as to