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Dear Readers,

Welcome to the first issue of *Parabola Incorporating Function* for 2006. The first two articles by Mike Hirschhorn are good illustrative examples of the sort of recreational games that you can play with mathematics. For Mike, a mathematical function becomes a play toy to experiment with, much the same as a child might play with pieces of Lego. Experiments like these can push the frontiers of mathematical knowledge, uncovering new relations and new structures.

Sometimes pushing the frontiers of mathematical knowledge requires a paradigm shift, as suggested in Michael Deakin's history of mathematics article. Michael points out that while much of the past success with mathematical models has been based on quantitative predictions we may need to turn our attention more towards mathematical models offering qualitative descriptions if we are to make progress with complex biological and social systems.

The article by Adelle Coster in this issue is a nice example of a current real world research problem, designing contact lenses, that can be facilitated by exploiting the mathematical properties of an ellipse.

As usual this issue contains the solutions to problems from the previous issue as well as new problems that you might like to attempt for yourselves. The problems from the previous issue were invented by Esther Szekeres and we would like to thank Terry Gagan (School of Mathematics and Statistics, Sydney University) for making these problems and their solutions available to us. We were also delighted to receive some solutions from our readers. Solutions by Ildar Gaisin in Year 11 at All Saints Anglican School, Merrimac, Queensland, are particularly noteworthy and have been included in this issue.

BI Henry
Editor