Chapter 18
Conclusion

In the previous 17 chapters I have attempted to introduce you to some of the important elements of mathematics employed in computer graphics. I knew from the start that this would be a challenge for two reasons: one was knowing where to start, and the other was where to stop. I assumed that most readers would already be interested in computer animation, games or virtual reality, and so on, and knew something about mathematics. So perhaps the chapters on numbers, algebra and trigonometry provided a common starting point.

The chapters on coordinates, vectors, transforms, interpolation, curves and patches, and analytic geometry are the real core of the book, but whilst revealing these subjects I was always wondering when to stop. On the one hand, I could have frustrated readers by stopping short of describing a subject completely, and on the other hand lost readers by pursuing a subject to a level beyond the book's objective. Hopefully, I have managed to keep the right balance.

I do hope that the chapter on geometric algebra will tempt you to explore this subject further. It's not often that something completely new comes along and challenges the way we solve geometric problems. I also hope that the two new chapters on calculus have provided a gentle introduction to this colossal branch of mathematics.

For many readers, what I have covered will be sufficient to enable them to design programs and solve a wide range of problems. For others, the book will provide a useful stepping stone to more advanced texts on mathematics. But what I really hope that I have managed to show is that mathematics is not that difficult, especially when it can be applied to an exciting subject such as computer graphics.

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