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Autore	Vince John
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Nota di contenuto	Chapter 1.Introduction -- Chapter 2.Numbers -- Chapter 3.Algebra -- Chapter 4.Trigonometry -- Chapter 5.Coordinate Systems -- Chapter 6.Determinants -- Chapter 7.Vectors -- Chapter 8.Matrices -- Chapter

9.Complex Numbers -- Chapter 10.Geometric Transforms -- Chapter 11.Quaternion Algebra -- Chapter 12.Quaternions in Space -- Chapter 13.Interpolation -- Chapter 14.Curves and Patches -- Chapter 15. Analytic Geometry -- Chapter 16.Statistics -- Chapter 17.Barycentric Coordinates -- Chapter 18.Geometric Algebra -- Chapter 19.Calculus: Derivatives -- Chapter 20.Calculus: Integration -- Chapter 21.Fourier Series -- Chapter 22.Worked Examples.

Sommario/riassunto

John Vince explains a comprehensive range of mathematical techniques and problem-solving strategies associated with computer games, computer animation, special effects, virtual reality, CAD and other areas of computer graphics in this completely revised and expanded seventh edition. The first five chapters cover a general introduction, number sets, algebra, trigonometry and coordinate systems, which are employed in the following chapters on determinants, vectors, matrix algebra, complex numbers, geometric transforms, quaternion algebra, quaternions in space, interpolation, statistics, curves and patches, analytical geometry and barycentric coordinates. Following this, the reader is introduced to the relatively new subject of geometric algebra, followed by two chapters that introduce differential and integral calculus. Finally, there are chapters on Fourier analysis and Worked examples. Mathematics for Computer Graphics covers all of the key areas of the subject, including:

- Number sets
- Algebra
- Trigonometry
- Complex numbers
- Coordinate systems
- Determinants
- Vectors
- Quaternions
- Matrix algebra
- Geometric transforms
- Interpolation
- Curves and surfaces
- Analytic geometry
- Statistics
- Barycentric coordinates
- Geometric algebra
- Differential calculus
- Integral calculus
- Fourier analysis

This seventh edition contains approximately 200 worked examples and over 350 colour illustrations, which are central to the author's descriptive writing style. Mathematics for Computer Graphics provides a sound understanding of the mathematics required for computer graphics software and setting the scene for further reading of more advanced books and technical research papers.
