

# 3D Math Primer for Graphics and Game Development

## Second Edition

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### Errata

*I have offended God and mankind because my work didn't reach the quality it should have.*

— Leonardo da Vinci

p. 88: (Reported by Damian Staniforth.) ...so common that we will **will** take a little bit ...  $\rightsquigarrow$  ...so common that we will take a little bit ...

p. 89, Figure 3.5: [The  $x$ -axis is mislabeled. The  $+x$  and  $-x$  labels should be swapped.]

p. 94, Figure 3.10: (Reported by Mark Anderson.) [The axes in the local perspective for robot upright space are all mislabeled. The  $+x$  and  $-x$  labels should be swapped, and the  $+z$  and  $-z$  labels should be swapped.]

p. 103: Assume, as before. that we have an object...  $\rightsquigarrow$  Assume, as before, that we have an object...

p. 142: (Reported by James Goldsmith.)  $\mathbf{v}'_{\perp}$  is the result of rotating  $\mathbf{v}'$  in this plane by the angle  $\theta$ .  $\rightsquigarrow$   $\mathbf{v}'_{\perp}$  is the result of rotating  $\mathbf{v}_{\perp}$  in this plane by the angle  $\theta$ .

p. 142: (Reported by Damian Staniforth.) If the vectors are linearly **independent**, then there is a portion ...  $\rightsquigarrow$  If the vectors are linearly **dependent**, then there is a portion ...

p. 266: (Reported by Francois Rebour.) We also verify that the equation  $i^2 = 1$  still holds.  $\rightsquigarrow$  We also verify that the equation  $i^2 = -1$  still holds.

p. 355: It is denser *per unit solid area*.  $\rightsquigarrow$  It is denser *per unit solid angle*.

p. 356: The idea of a solid **area** is probably new to some readers, ...  $\rightsquigarrow$  The idea of a solid **angle** is probably new to some readers, ...

p. 358: More specifically, radiance is the flux per unit projected **angle**, per solid angle.  
 $\rightsquigarrow$  More specifically, radiance is the flux per unit projected **area**, per solid angle.

p. 425: ...include practically every **PlayStation 2** game, such as the first *Tomb Raider*.  
 $\rightsquigarrow$  ...include practically every **PlayStation 1** game, such as the first *Tomb Raider*.

p. 509: (Reported by Michael Oleksy.)

$$\begin{aligned} &= 1 - \frac{3x^2}{3!} + \frac{5x^4}{4!} - \frac{7x^6}{7!} + \frac{9x^8}{9!} + \dots && \text{(Power rule)} \\ \rightsquigarrow &= 1 - \frac{3x^2}{3!} + \frac{5x^4}{5!} - \frac{7x^6}{7!} + \frac{9x^8}{9!} + \dots && \text{(Power rule)} \end{aligned}$$

p. 580, Listing 12.1: **SprintDamper**  $\rightsquigarrow$  **SpringDamper**

p. 783, Answer 11.8: ...have the same sign, then the discriminant can never be **positive**, and there will...  $\rightsquigarrow$  ...have the same sign, then the discriminant can never be **negative**, and there will...