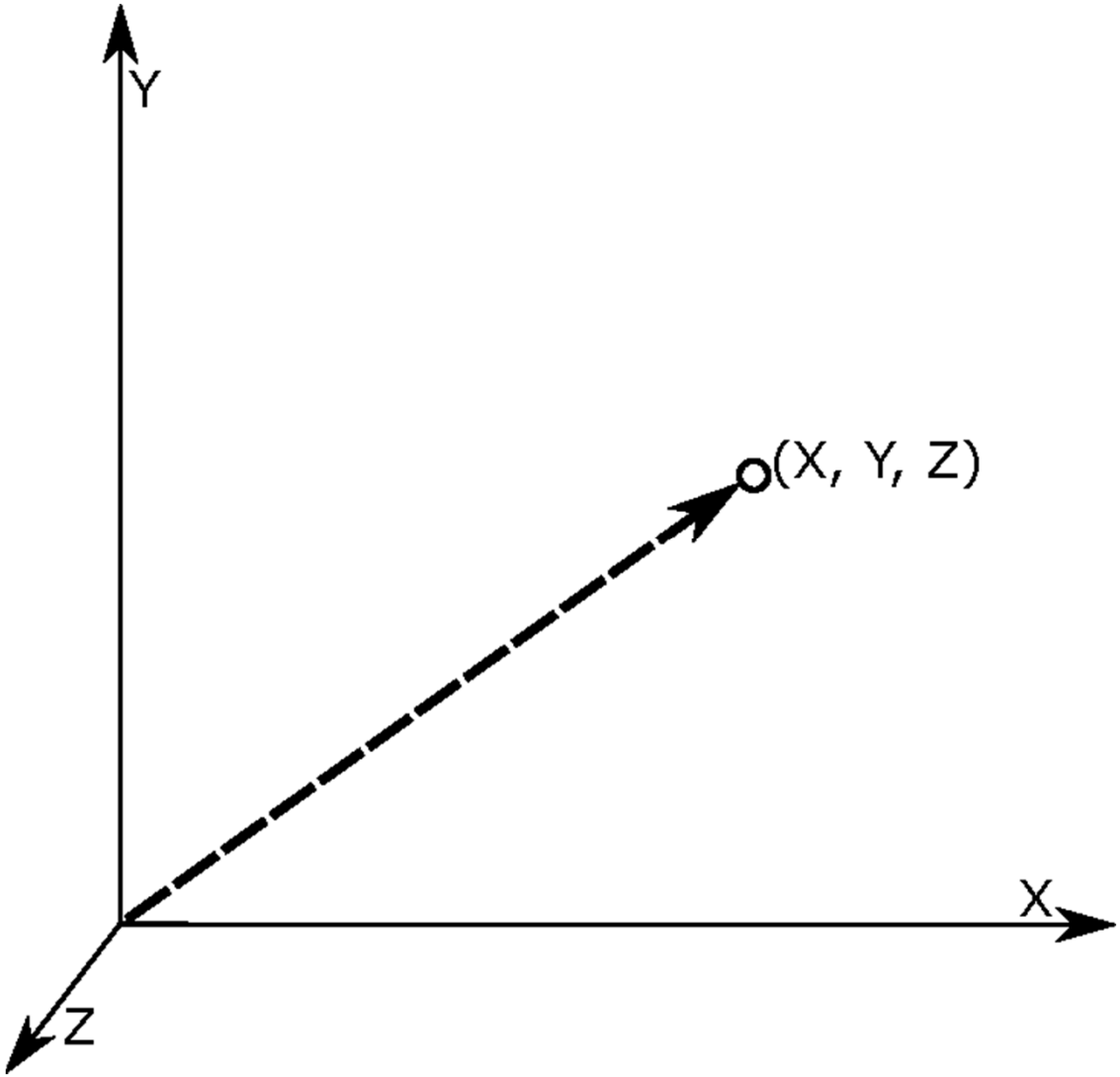

Figure 4.1: A point in space is both a vertex and a vector

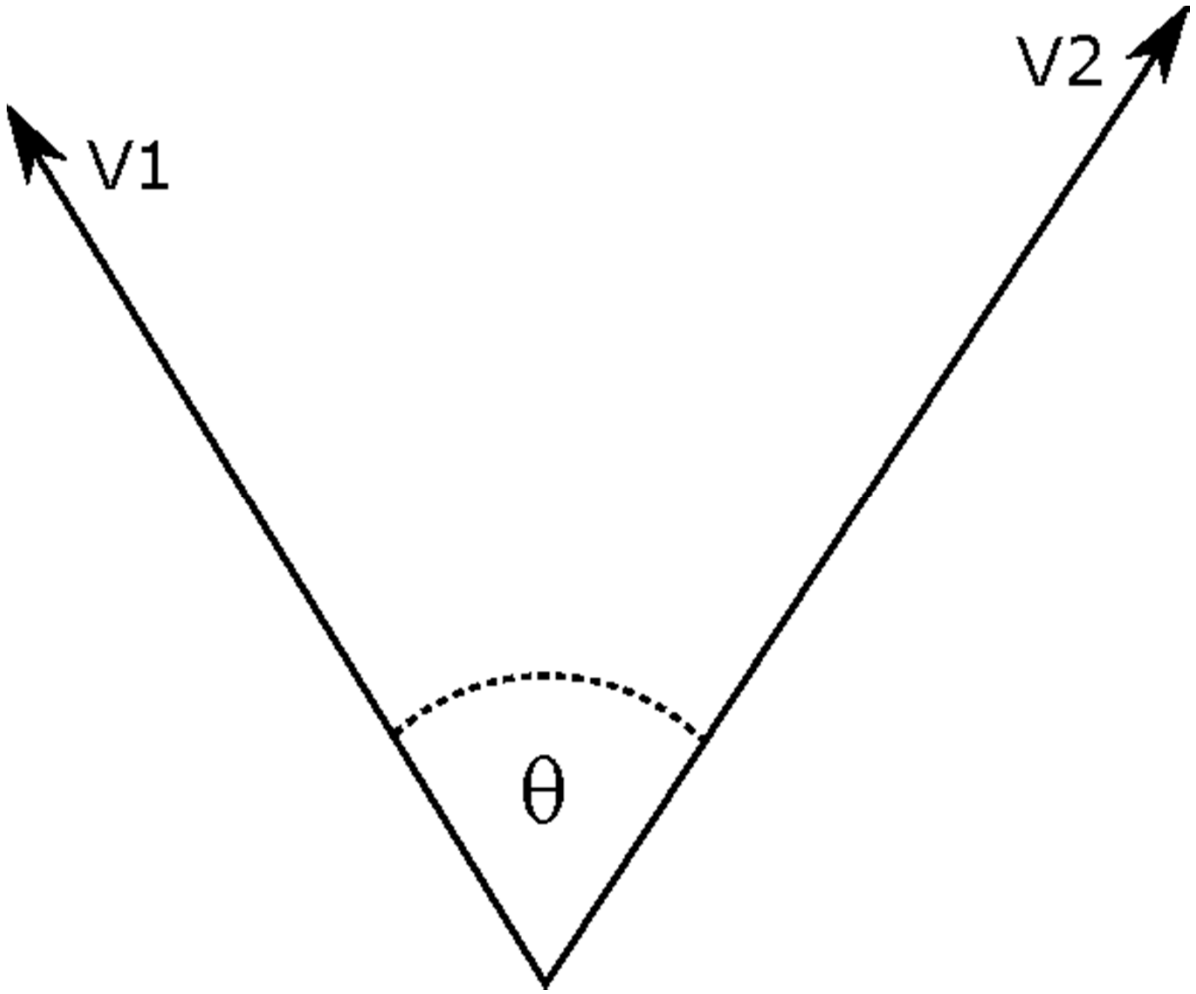

Figure 4.2: The dot product: cosine of the angle between two vectors

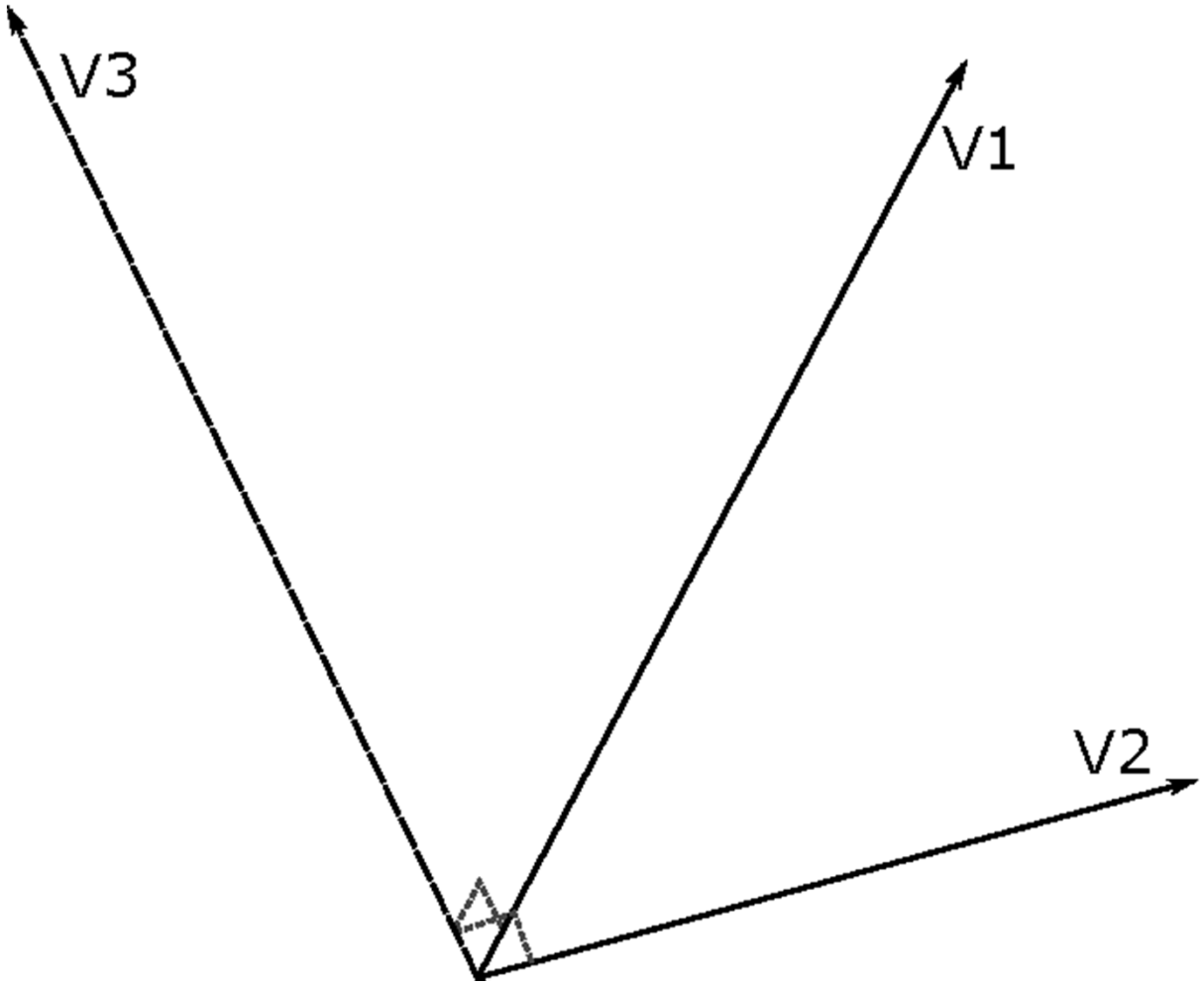

Figure 4.3: A cross product returns a vector perpendicular to its parameters

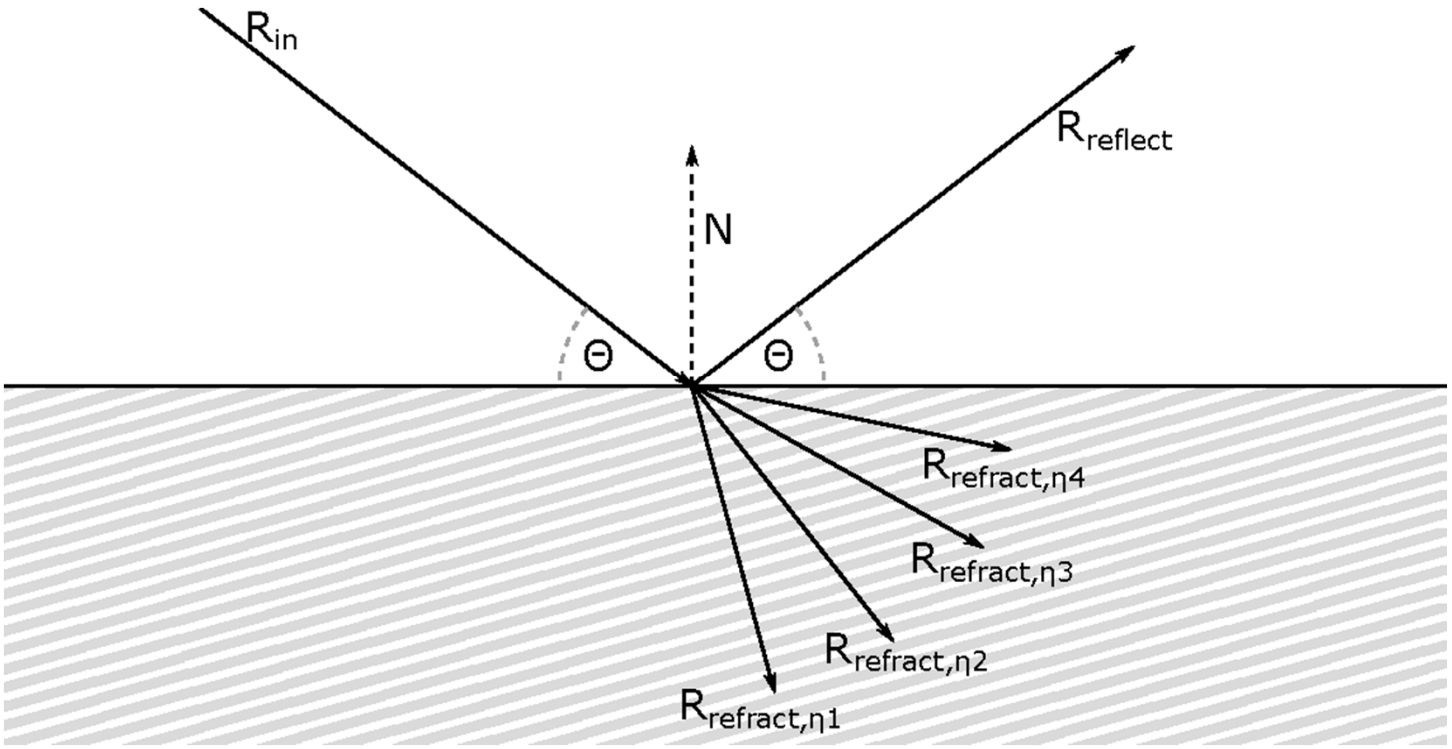

Figure 4.4: Reflection and refraction

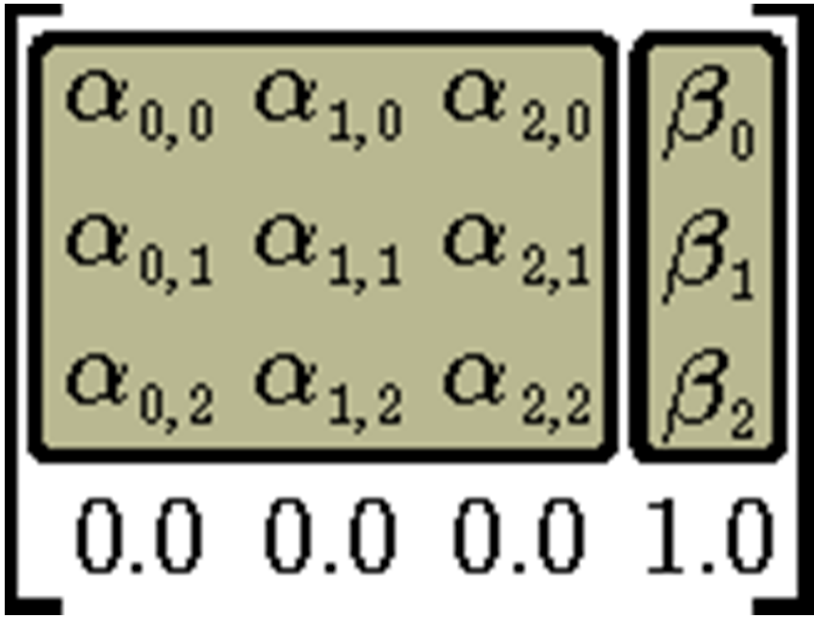

Figure 4.5: A 4×4 matrix representing rotation and translation

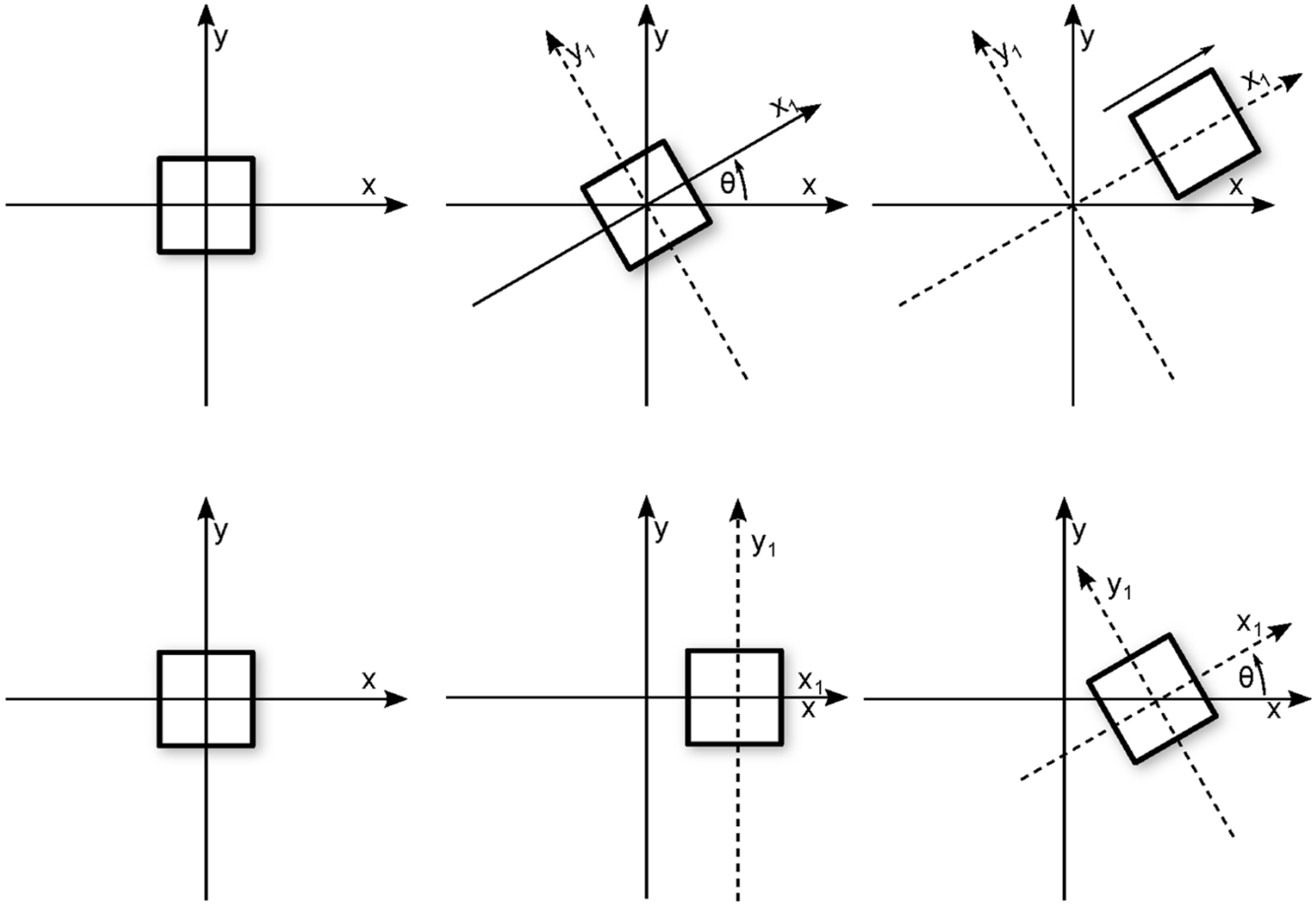

Figure 4.6: Modeling transformations: (1) rotation, then translation and (2) translation, then rotation

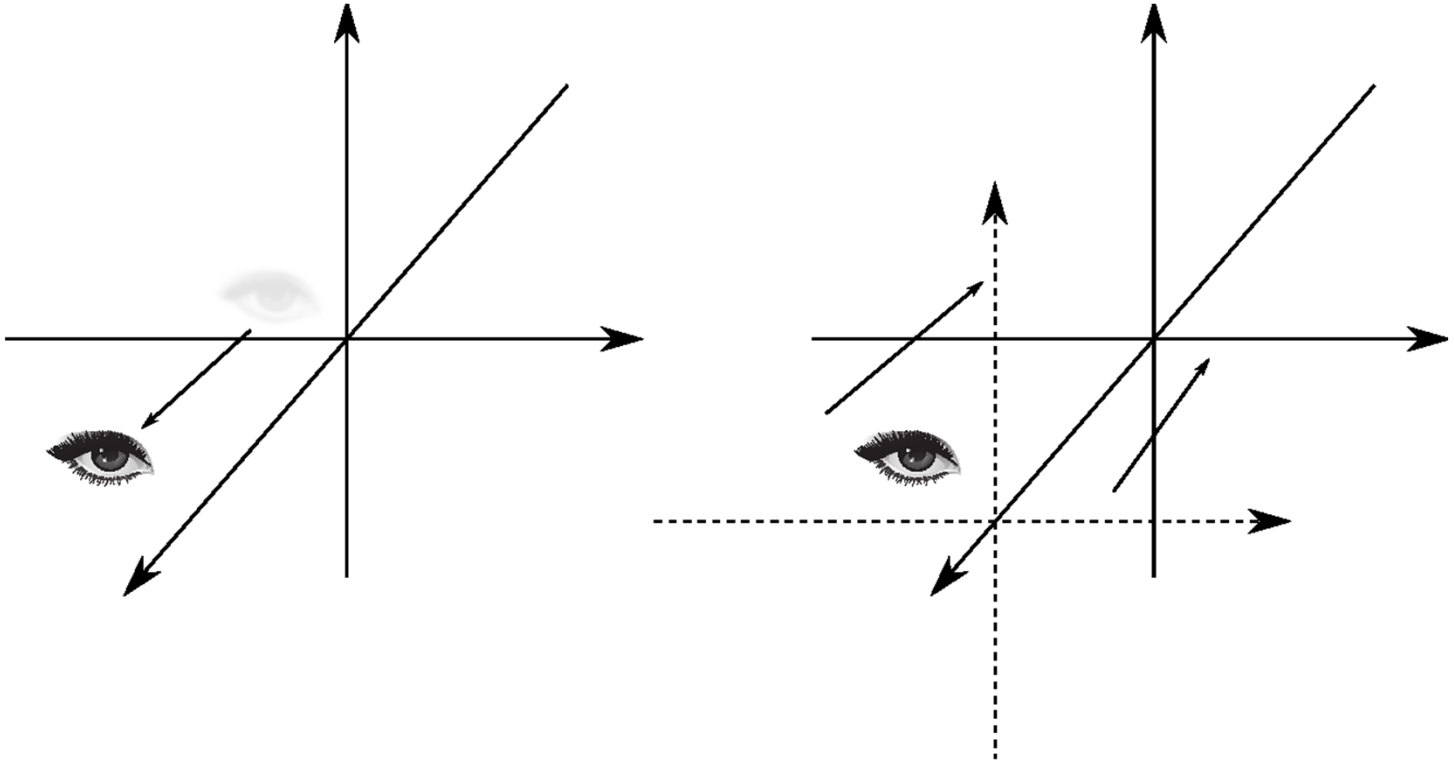

Figure 4.7: Two perspectives of view coordinates

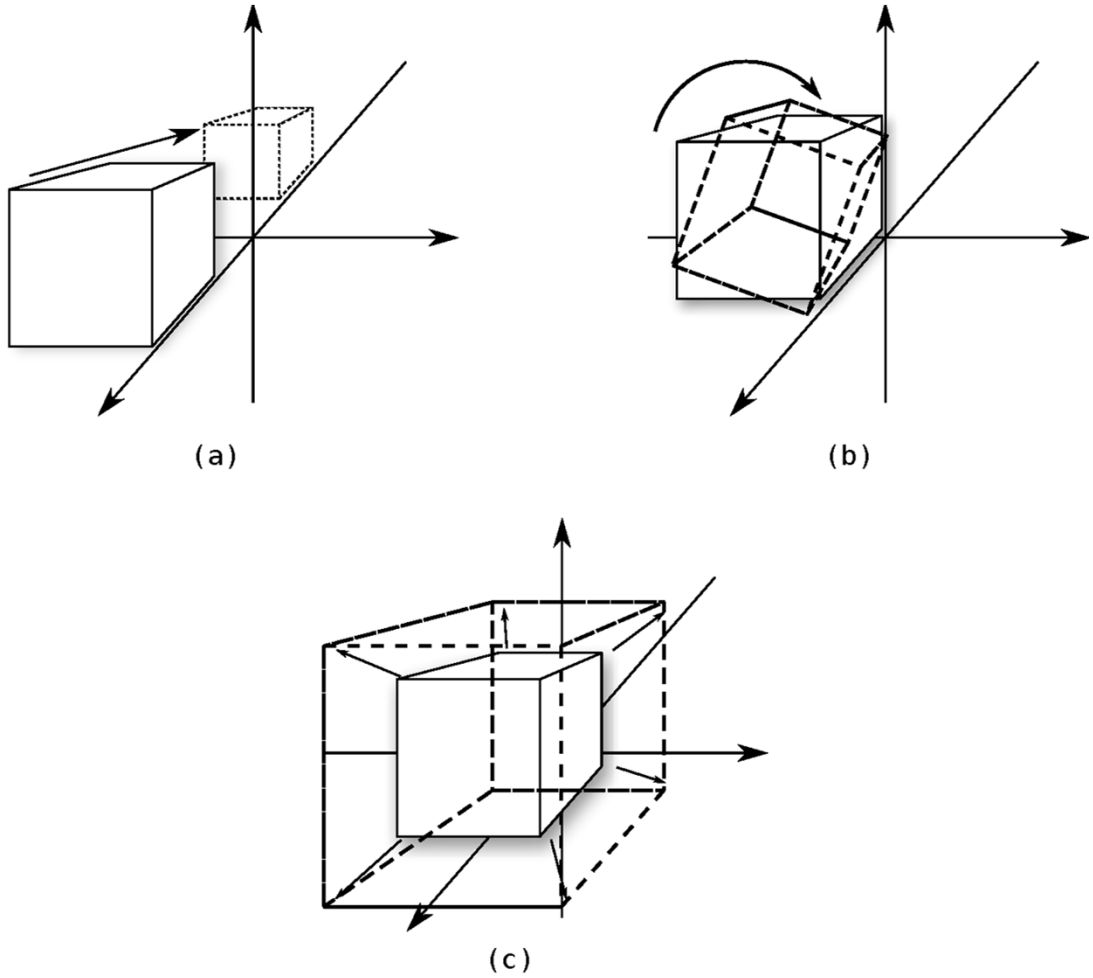

Figure 4.8: The modeling transformations

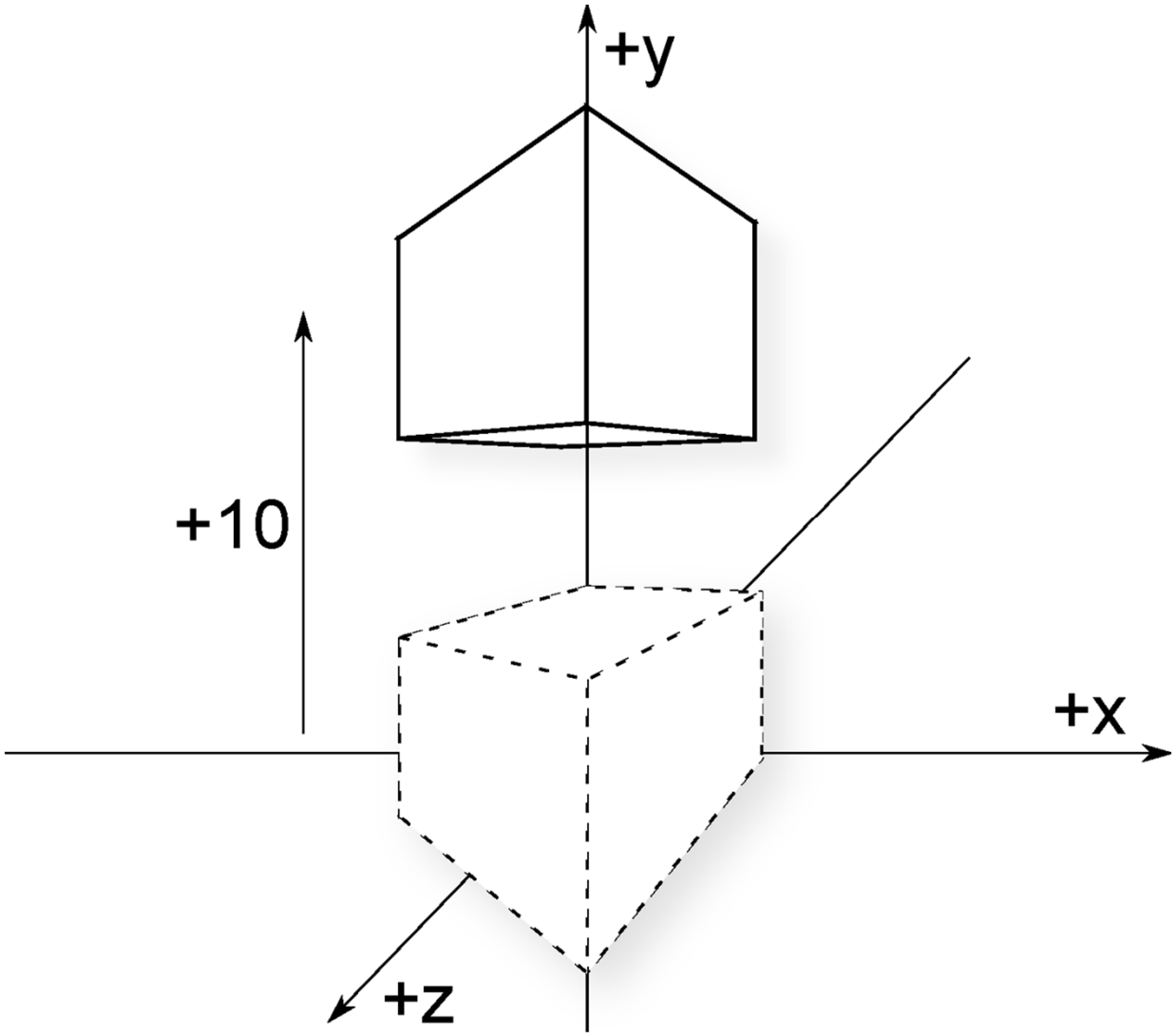

Figure 4.9: A cube translated ten units in the positive *y* direction

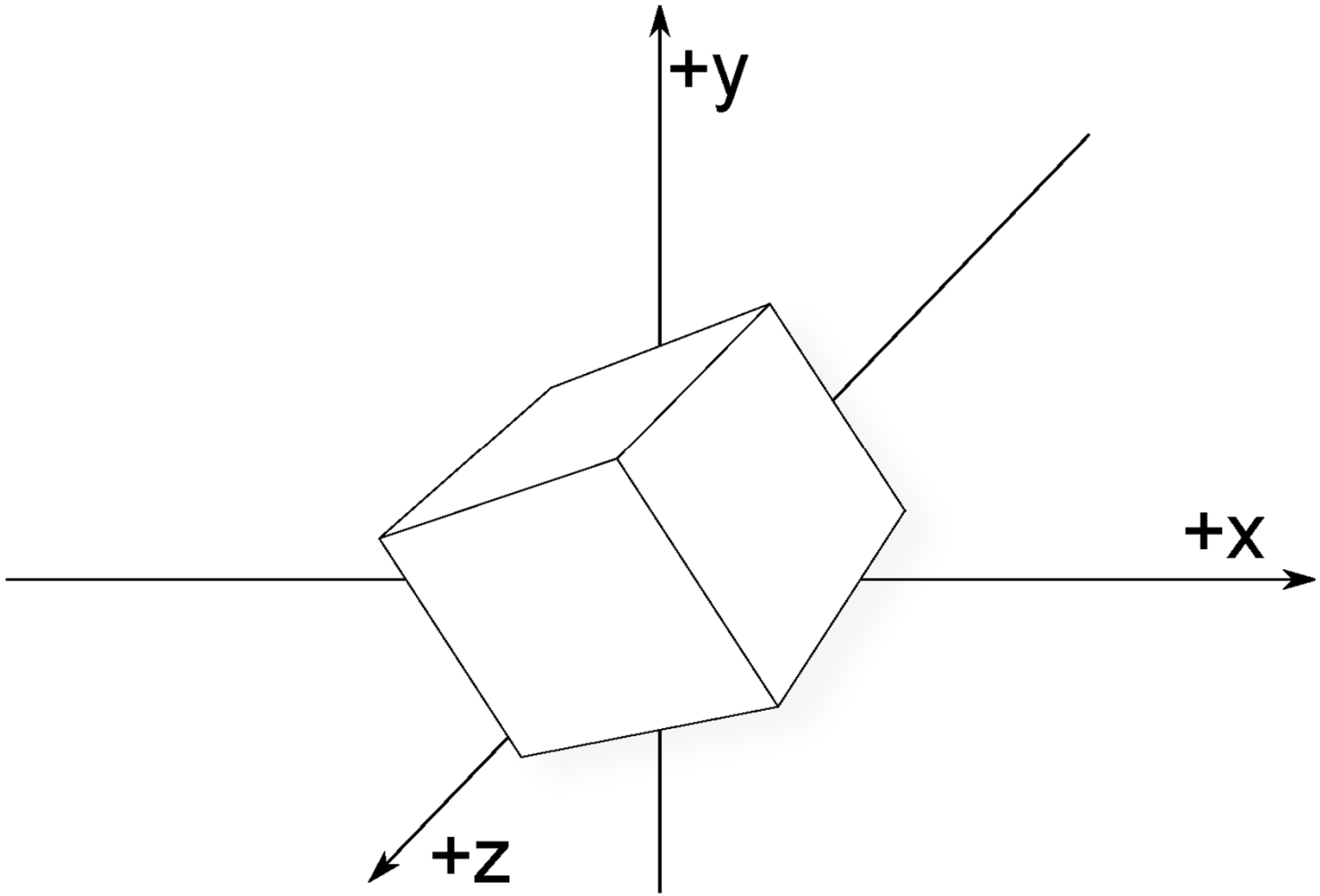

Figure 4.10: A cube rotated about an arbitrary axis

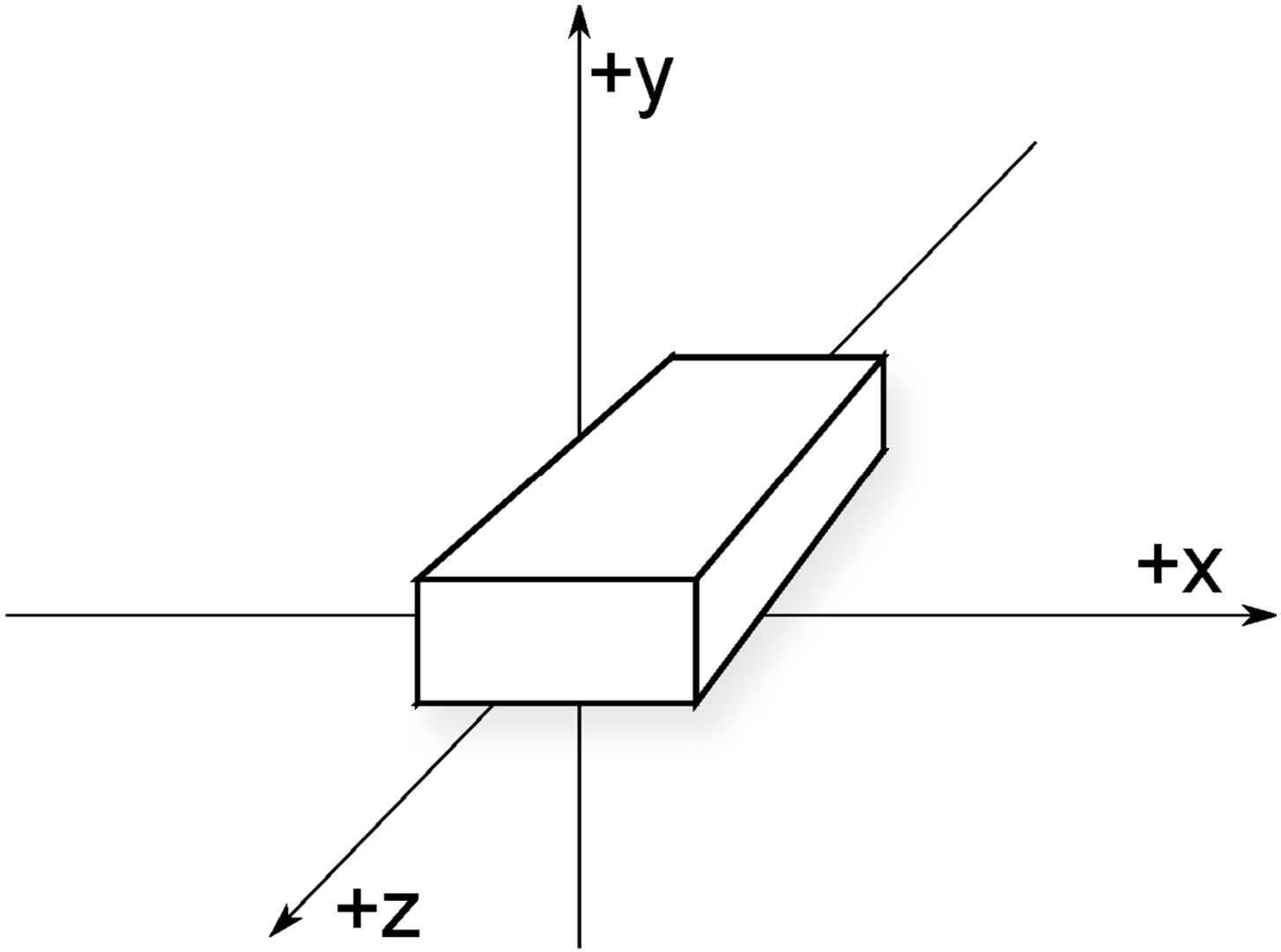

Figure 4.11: A non-uniform scaling of a cube

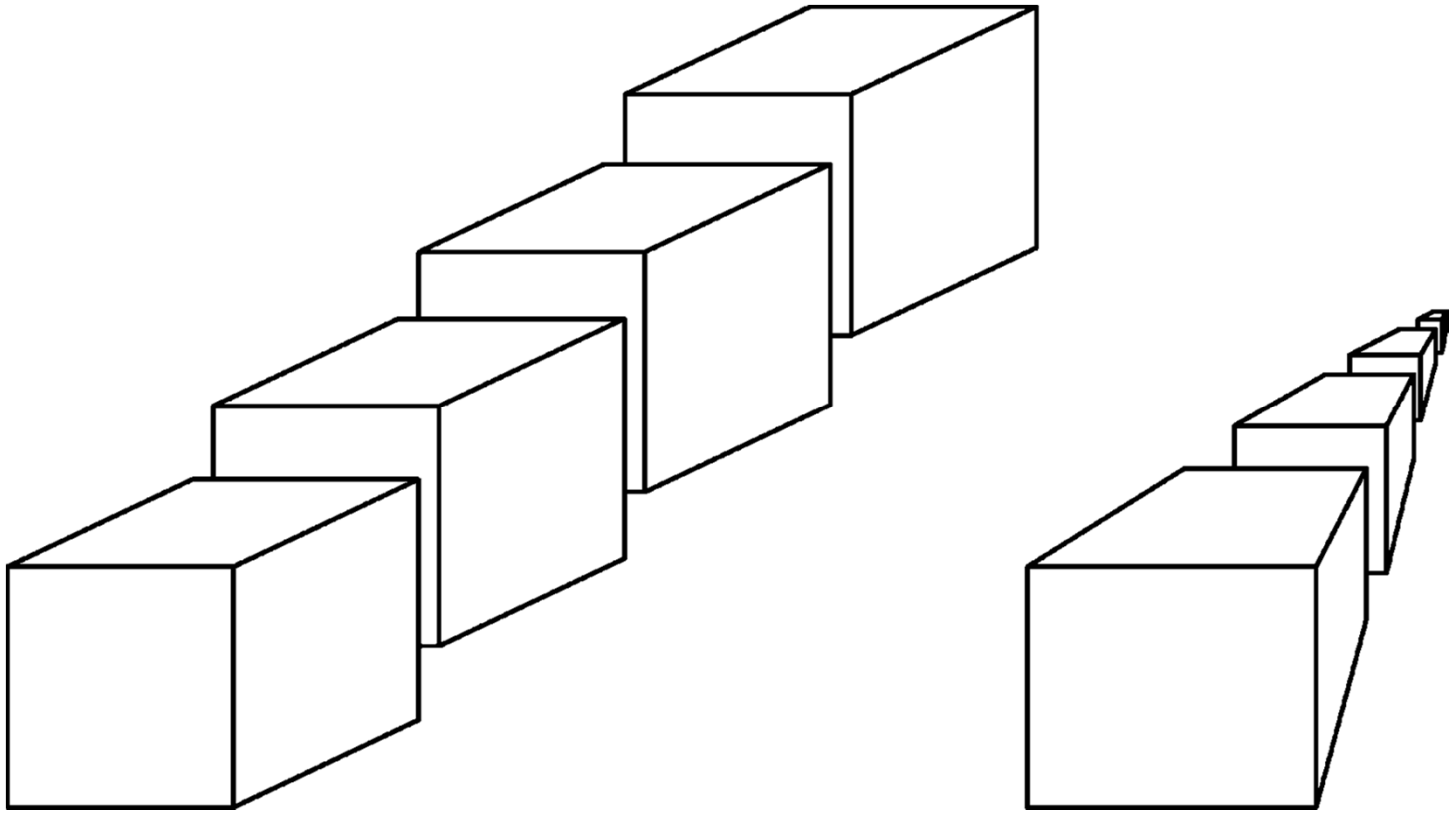

Figure 4.12: A side-by-side example of an orthographic versus perspective projection

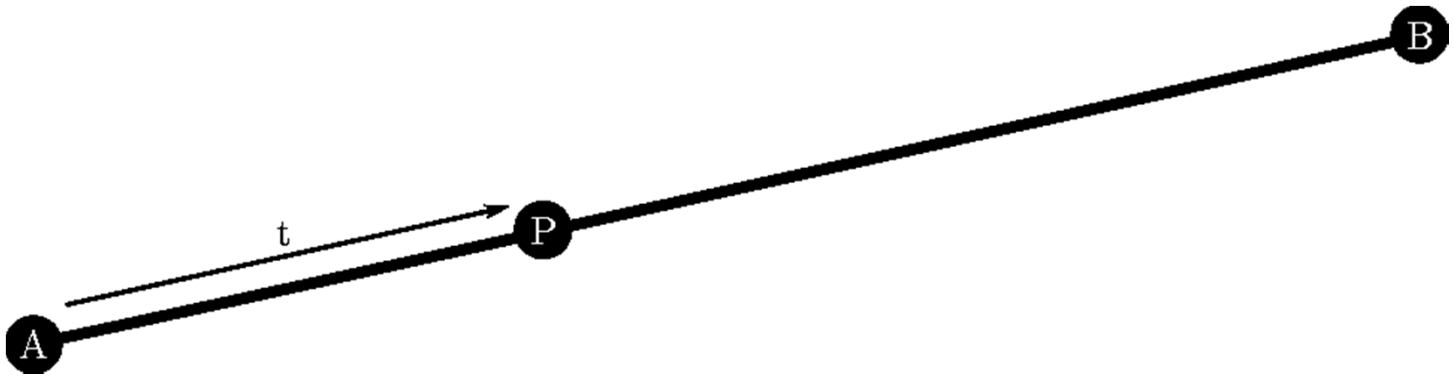

Figure 4.13: Finding a point on a line

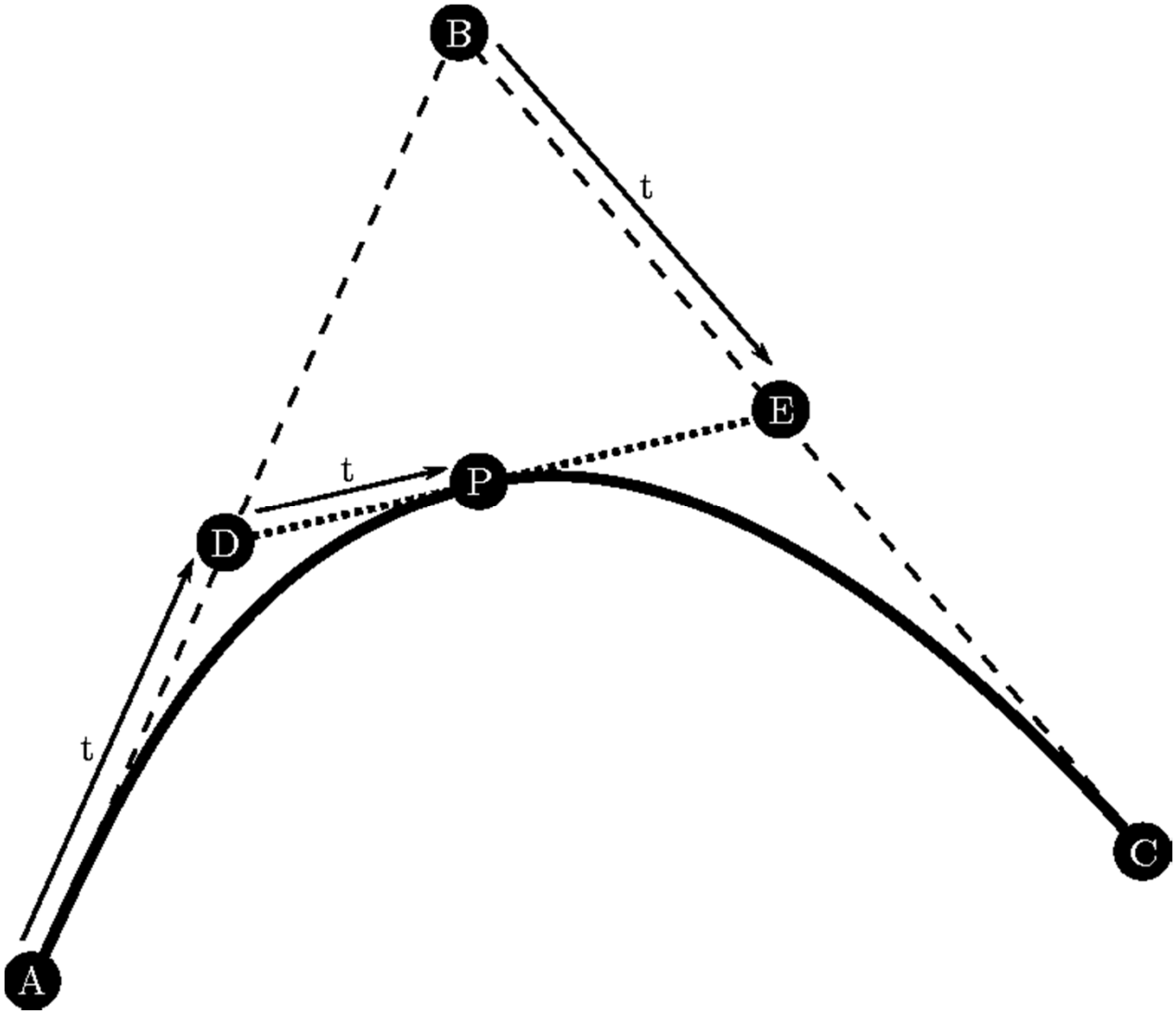

Figure 4.14: A simple Bézier curve

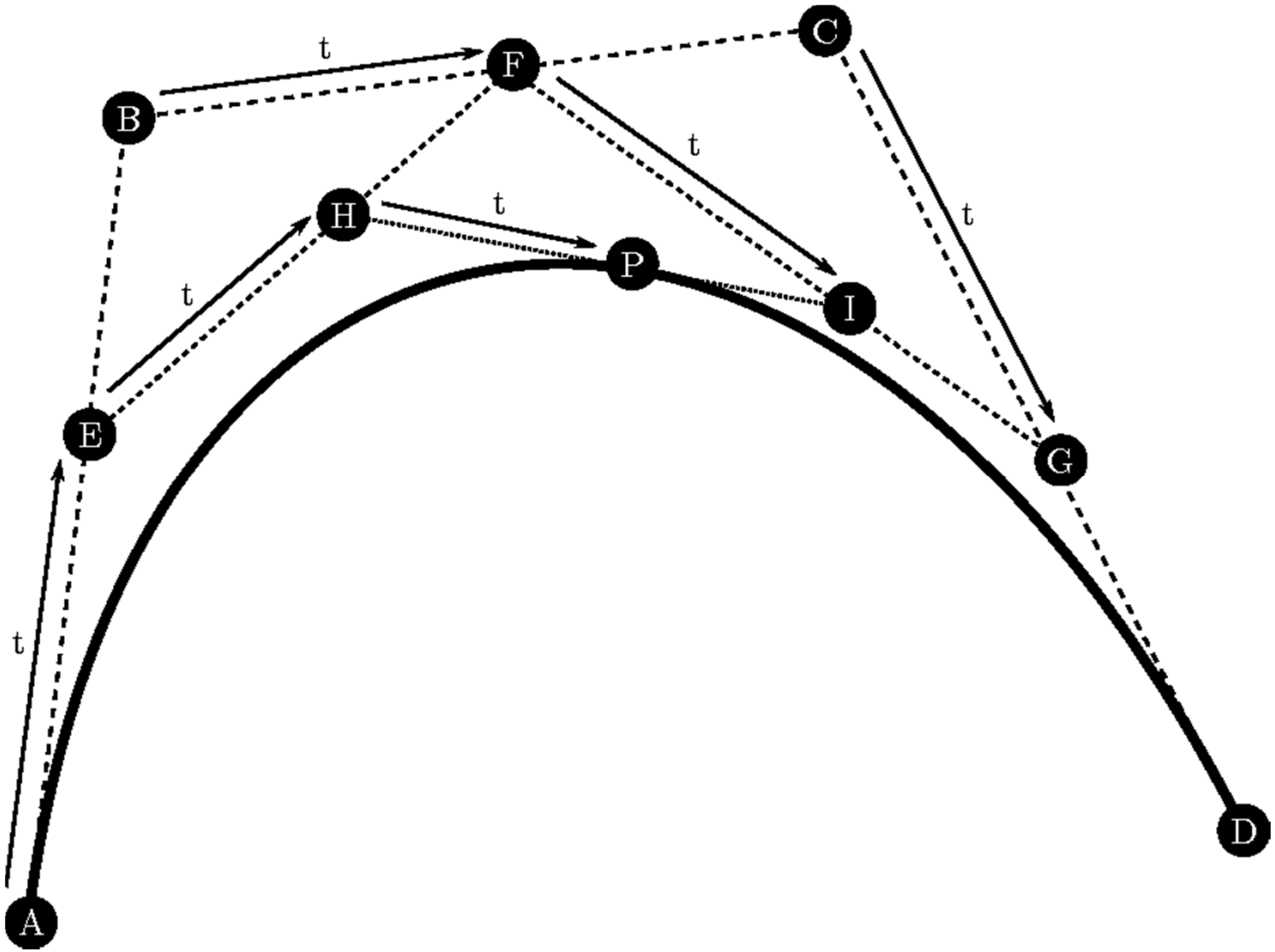

Figure 4.15: A cubic Bézier curve

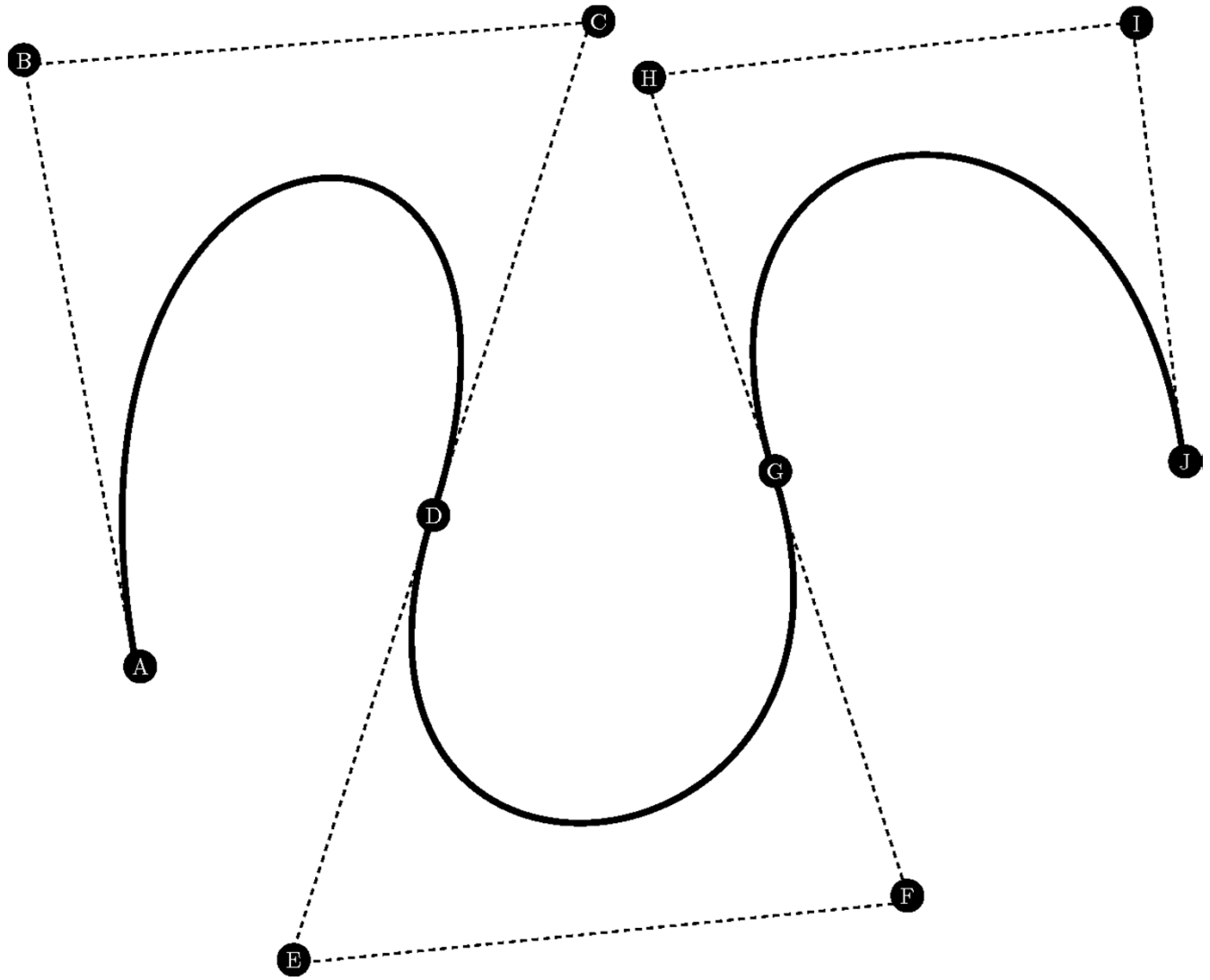

Figure 4.16: A cubic Bézier spline