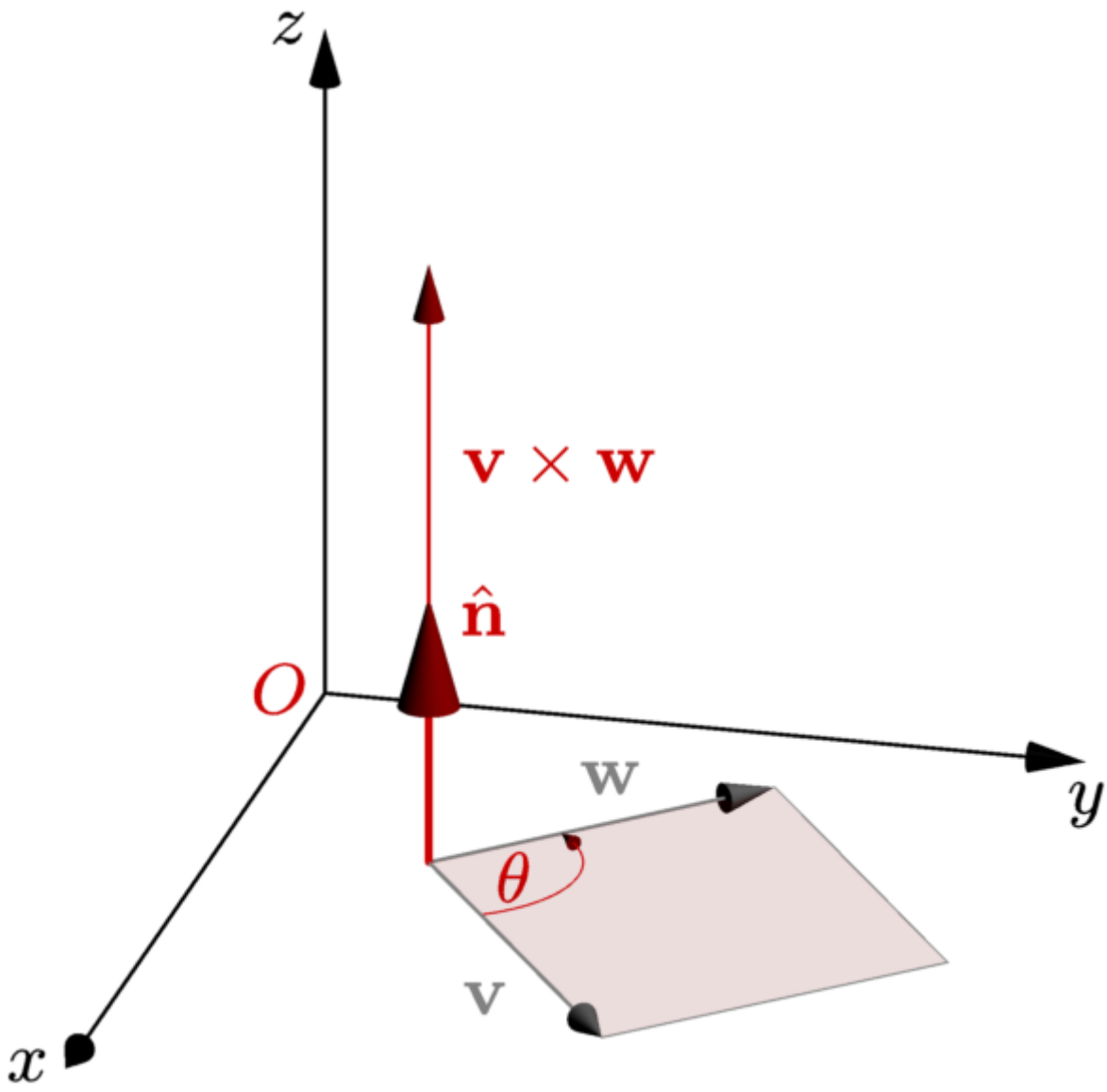

Figure 4.14: The vector product of $\mathbf{v}$ and $\mathbf{w}$ is defined $\mathbf{v} \times \mathbf{w} = |\mathbf{v}||\mathbf{w}|\hat{\mathbf{n}} \sin\theta$ in terms of the angle θ separating the two vectors and the magnitude of each vector. The unit vector $\hat{\mathbf{n}}$ is normal to the plane containing $\mathbf{v}$ and $\mathbf{w}$ in the direction determined by the right hand rule.