

CHAPTER OVERVIEW

35: The Cross Product

Many of the equations involving rotational motion of bodies involve the vector cross product, so before proceeding further, let's examine the cross product of two vectors in some detail.

You'll recall from Chapter 7 that there are several different ways of multiplying one vector by another vector. There we examined one such type of multiplication, the dot product. Before we study rotational motion, we'll need to learn about another type of vector multiplication, the cross product. In the cross product, one multiplies a vector by another vector, and gets another vector back as the result (unlike the dot product, which returns a scalar result).

Unlike the other two kinds of vector multiplication, the cross product is only defined for three-dimensional vectors.¹

[35.1: Definition and Forms](#)

[35.2: Properties](#)

[35.3: Inverse](#)

¹ It is also possible to define a vector cross product in seven dimensions. A meaningful vector cross product can only be defined in three or seven dimensions.

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