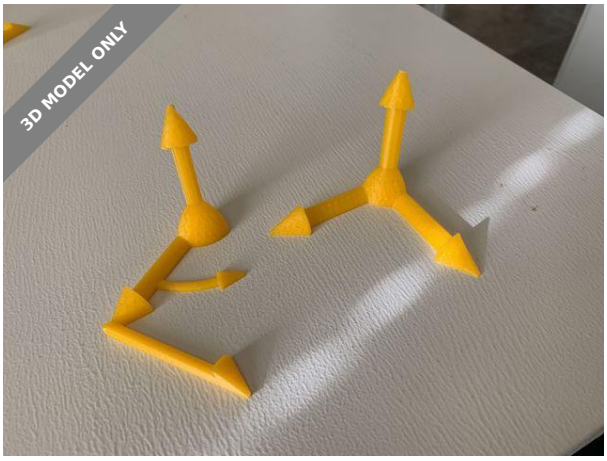

Cartesian and Cylindrical Orthogonal (Right-hand) Coordinate System vectors

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VIEW IN BROWSER

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Summary

Four models, two of a Cartesian (XYZ) system and two of a Cylindrical (RTZ) system - one has labels, the other does not

Learning > Math

Tags: cartesian cylindrical engineering math vector

I had a problem which required me to transform some vectors from Cartesian to Cylindrical. Of course I would just use my right hand and then twist my wrist around to match the vectors on my computer screen. But all that twisting started to ache a little, so I thought, “Why not just print the coordinate systems and then simply position them?”

Thus these models were born. (The irony is that by the time I was done printing, I was also done with my problem ... for now)

I used FreeCAD to model them. They can print with no support (although you might have to orient them correctly and there is a little overhang on the vector head. I printed with tree-supports.

One of each system has labels, the other does not.

If you're real careful, you can use the Cartesian one as a landscape phone stand ... an unstable one, but it does work for my 5.85-inch phone.

Model files

cartesian_coord_vectors.stl

cylindrical_coord_vectors.stl

cartesian_coord_vectors_labelled.stl

cylindrical_coord_vectors_labelled.stl

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