

Write a program to perform vector arithmetic.

You are to create a class, `Vector`, which has three properties: `x`, `y`, `z`. Any object of the class represents the vector $xi + yj + zk$.

Override the `__add__`, `__sub__`, `__mul__` and `__len__` operators.

The addition operator should return a new vector which is the sum of both vectors, the subtraction operator returns the difference, the multiplication operator returns the cross product and the `len()` function returns the magnitude of the vector passed in as a parameter.

Create two objects of the class `Vector`, find the magnitude of both vectors, and then find the sum, difference and cross product.