

# The Challenge Round

*Filename: vectors*

You need to calculate the trajectories of multiple colliding objects, but before you can do that, you need to be able to represent the objects' positions.

## The Problem:

Create a `Vector3` class that takes three inputs in the constructor: `x`, `y`, and `z`. The vector class needs to have four base methods: `add`, `subtract`, `dot`, and `cross` that take two vector3's and return the result of the operation. Printing a Vector3 should display as "<x, y, z>".

## The Input:

Two Vector3's will be instantiated, and each mathematical operation will be performed.

## The Output:

New Vector3 results of the mathematical operations. They should display in the correct format (hint: [dunder or magic methods in python](#))

## Sample Input:

```
vector_a = Vector3(5.0, 7.0, 4.0)
vector_b = Vector3(2.0, 4.0, 8.0)
print(Vector3.add(vector_a, vector_b))
print(Vector3.subtract(vector_a, vector_b))
print(Vector3.dot(vector_a, vector_b))
print(Vector3.cross(vector_a, vector_b))
```

## Sample Output:

```
<7.0, 11.0, 12.0>
<3.0, 3.0, -4.0>
70.0
<40.0, -32.0, 6.0>
```