Special Problem 4-3.1

A static electric field is evaluated at point x=2, y=-1, z=1 (with units of meters), and determined to be:

$$\mathbf{E}\left(x=2,y=-1,z=1\right)=\frac{\hat{a}_x+2\hat{a}_y-2\hat{a}_z}{12\pi\varepsilon_0}$$

This electric field was generated by a point charge of **–9.0 Coulombs**.

The point charge is located **3 meters** from the evaluation point x=2, y=-1, z=1.

1.   Find the **exact location** of the point charge.

2.   Determine the **electric field vector** at point x=5, y=3, z=6.