Special Problem 4-6.2

Consider the **dipole** shown below. Two point charges lie on the *x*-axis, each a distance of 0.01 m from origin.

1) Determine the electric **potential difference** V_{ab} between the point denoted by $\overline{r_a} = 4 \ \hat{a}_x + 3 \ \hat{a}_z$ and the point denoted by $\overline{r_b} = -3 \ \hat{a}_x + 4 \ \hat{a}_y$.

___ *Z*

лY

0.01 m 0.01 m $\rightarrow x$ + -12,500π ε₀ C 12,500π ε₀ C