

Special Problem 4-6.4

Consider the **dipole** shown below, where both charges lie on the x-axis.

The **positive** charge lies at a point with coordinate $x = 0.999$ m.

The **negative** charge lies at a point with coordinate $x = 1.001$ m.

At a point with coordinates $x = 4$ m, $y = 4$ m, and $z = 0$, the **electric potential** is equal to $-12/(\pi\epsilon_0)$ Volts.

Determine the value of dipole charge Q . (Don't be surprised if this answer is big!).

