Phys102 Assignment Cover Sheet

First Name:_____ Last Name:_____ Mark: _____

Student ID:_____ Date: _____

Phys102 Written Assignment #2

Due Friday Sept 24, 10:30am.

Textbook (Giancoli, SFU edition), page 588, question #67.

(*a*) Show that at points along the axis of a dipole (along the same line that contains +Q and -Q), the electric field has magnitude

$$E = \frac{1}{4\pi\varepsilon_0}\frac{2p}{r^3}$$

for $r >> l$, where r is the distance from a point to the center of the dipole.

(*b*) In what direction does $\vec{\mathbf{E}}$ point?