Set 3 – due 22 September

"The Fox knows many things, but the Hedgehog knows one great thing" – Archilochus

1) Jackson 3.2. [20 points] (a)–10, (b)–5, (c)–5. Expand Φ in Legendre polynomials so as not to duplicate the next problem.

2) [20 points] Find the Green's function appropriate to the geometry and boundary conditions of Problem 1, and use this Green's function to re-derive Φ in part (a).

3) Jackson 3.3 [25 points] Believe it or not, it is possible to get a closed form solution for $\Phi(z)$. I suggest a close examination of the inverse trig function section of your integral table. But physical reasoning can get you the leading term, too. (a)-10, (b)–10, (c)–5.