

## Physics 712

### Chapter 0 Problems

1. Consider the vector function  $\mathbf{x}/|\mathbf{x}|^3$ . By direct computation, show that it has no curl for  $\mathbf{x} \neq 0$ . Then, by integrating it over a small spherical volume, show that it also has no curl at  $\mathbf{x} = 0$ .