

1. (4 pts) Problem 2.56 in Griffiths (2.55 in 4th ed). *Suppose an electric field ...*
2. (4 pts) Problem 2.64 in Griffiths (not in 4th ed). *Many programming languages ...* This problem requires you to run `Mathematica`. Rice provides free access to this program: [\[click here\]](#). Please submit a printout of your notebook, showing your code and the plot outputs.
3. (6 pts) Problem 3.2 in Griffiths (same in 4th ed). *In one sentence ...* ALSO: adapt your `Mathematica` notebook from Problem 2 to make a visualization of $\mathbf{E}(\mathbf{r})$ and $V(\mathbf{r})$ for this configuration.
4. (4 pts) Problem 3.3 in Griffiths (same in 4th ed). *Find the general ...*
5. (10 pts) Problem 3.21 in Griffiths (3.19 in 4th ed). *The potential at the surface ...*
6. (4 pts) Problem 3.38 in Griffiths (3.36 in 4th ed). *Show that the electric field ...*
7. (8 pts) Problem 3.44 in Griffiths (3.40 in 4th ed). *Two long straight wires ...*