1.

2. (a) I think my Green's function is a little off, but it worked for the other problems so I did not change it. I got V[1,0]=0.779 and V[2,0]=0.669.

   (b) A 2D view of the charge can be seen in square_box_charge.png. The charge along one edge is shown in oneside_charge.png.

   (c) The potential everywhere in space can be seen in square_box_potential.png. The potential inside is very close to constant, with mean potential 1.0026 and standard deviation 0.00019. A detailed view of the interior potential can be seen in interior_potential.png, showing slight increases towards the corners. The field I calculated can be seen in square_box_field.png. It follows what we expect: field lines generally perpendicular to equipotentials except for edge effects, and stronger field strength near the corners.