Several images
Two grounded conducting semi-infinite planes intersect at an angle of 60°. A single charge $+q$ is placed on a plane bisecting the angle between the planes at a distance $d$ from the intersection. Find the potential between the two planes.

Force and torque on a dipole
Consider an ideal electric dipole (that means, the size of the charge distribution $l$ goes to zero as the charges go to infinity keeping $ql$ constant). What are the force and torque acting on the dipole as it is immersed on an external electric field that varies little on a distance scale $l$?

Interaction between dipole
Find the interaction energy between two electric dipoles. There is a $\delta$ function contribution when they are on top of each other.

Greens function in 2D
Find the two-dimensional Dirichlet Green’s function for a circle.

Make your own problem
a) Make up problem.
b) Solve it.

Prizes will be given at the end of semester in the categories “Technical prowess” and “Creativity”.

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