

## Electricity and Magnetism, PHYS 350 Problem set 2

1. Problem 2.43 (2.39).
2. Problem 2.52 (2.47).
4. Problem 2.55 (2.50).
5. Problem 2.56 (2.51).
6. Problem 3.2 (3.2).
7. Problem 3.8 (3.7).
8. Problem 3.9 (3.8).
9. Problem 3.10 (3.9).
10. A point charge  $q$  is located between two parallel, grounded, conducting planes that are separated by a distance  $d$ .
  - a) Find the locations of the infinite number of image charges and justify your choice.
  - b) Express the force on the charge  $q$  by an infinite series.

### Supplementary problems B:

- B1.** Problem 2.36 (2.34).
- B2.** Problem 2.39 (2.36).
- B3.** Problem 2.42 (2.38).
- B4.** Problem 2.54 (2.49).
- B5.** Problem 3.1 (3.1).
- B6.** Problem 3.3 (3.3).
- B7.** Problem 3.7 (3.6).

Numbers from Griffiths book, 4<sup>th</sup> edition, (3<sup>rd</sup> edition in parentheses)