

PH 4B HOMEWORK ASSIGNMENTS

NOTE: You are expected to start each problem with the **most basic equation** (from the particular chapter) that is related to the concepts in the problem.

For example, in chapter 22, if you are solving a problem that asks you to determine the electric field at a position 3 cm above a charged ring (containing a given amount of charge), you **should not start the problem out by writing equation 22-16**, then plug the appropriate numbers into eqn 22-16. **You must start with eqn 22-3** and then proceed to solve for (or derive) eqn 22-16, then plug the numbers into eqn 22-16.

| <u>Chapter / Topic</u> | <u>Questions / Problems (from Halliday, Resnick & Walker)</u> |
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| 21 Electric Charge | Quest's: # 3,4,6 Problem #'s 1,5,7,21,23,25,39,54,65 |
| 22 Electric Fields | Quest's: # 1,2,7,8 Problem #'s 3,6,8,19,22,27,29,40,47,51 |
| 23 Gauss' Law | Quest's: # 1,2,3 Problem #'s 1,4,17,27,30,34,37,45,51,85 |
| 24 Electric Potential | Quest's: # 1,2,3 Problem #'s 1,4,5,9,11,29,42,54,57,100,114 |
| 25 Capacitance | Quest's: # 4,5,11 Problem #'s 1,2,6,12,23,27,30,34,37 |
| 26 Current & Resistance | Quest's: # 2,3 Problem #'s 1,7,11,16,17,25,33,39,43 |
| 27 Circuits | Part A: Quest's: # 2,4,9 Problem #'s 1,2,5,9,16,19,73,80 Part B: Quest's: # 8 Problem #'s 30,32,33,37,39,43,47,49,57 |
| 28 Magnetic Fields | Quest's: # 2,3,7 Problem #'s 6,7,16,19,28,35,40,46,85 |
| 29 Magnetic Fields due to Currents | Quest's: # 3,5,7 Problem #'s 5,8,19,33,35,39,41,44,50,76,91 |
| 30 Induction & Inductance | Quest's: # 3,6,9 Problem #'s 3,4,7,11,23,24,30,34,53,62,65,68 |
| 31 Electromagnetic Oscillations & Alternating Current | Part A: Quest's: # 3,9,10 Problem #'s 2,6,7,10,17,20,26 Part B: Problem #'s 31,32,37,45,51,60,64,70,90 |
| 32 Magnetism of Matter: Maxwell's Equations | Quest's: # 1,3,7 Problem #'s 2,5,10,12,17,23,26,42,44 |
| 33 Electromagnetic Waves (Sections 33-1 to 33-6 ONLY) | Quest's: # 1,2 Problem #'s 1,5,7,12,19,20,28 |