ECE 220
Spring 2010
Matlab Problem 1
Worth 50 points
Due February 23, 2010

We have 10 point charges that are specified in the following list

Charge (nanocoulombs)	X coordinate (cm)	Y coordinate (cm)
1	1	1
-2	1.1	1.5
3	2.5	3.75
4	4.1	5.2
-5	1	0.5
4	7	3
3	3	7
2	3.16	2.84
-1	9.5	2.3
10	2.3	9.5

Compute the electric field at the following 3 sets of coordinates (all in cm). Specify the electric field by giving its x and y components at the coordinates specified below.

X = .5, Y=.6
X=20, Y=15
X=-.5, Y=0

You must use MATLAB. You must send Professor Shohet a MATLAB m file as an attachment in an email. The name of the matlab file must have your name in it. The code must run and generate the correct answers Your grade will be based on whether or not the code runs and whether you get the correct answers. THE CORRECT UNITS AND CONVERSION FACTORS WILL BE NEEDED SO THAT THE FINAL RESULTS ARE IN VOLTS/METER. IF THE CORRECT UNITS ARE NOT GIVEN, YOU WILL NOT RECEIVE FULL CREDIT.