

Practicing Calculating Net E, F, V, and PE. Example 3

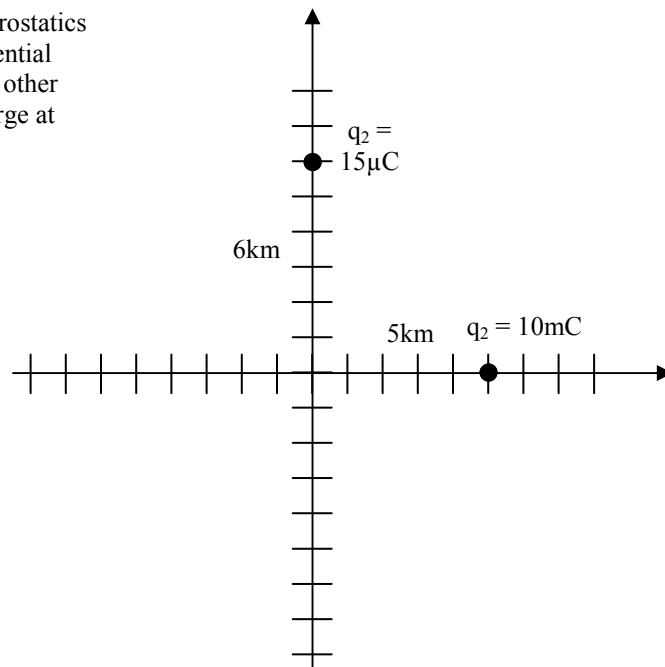
Instructions:

Page 1 the example;

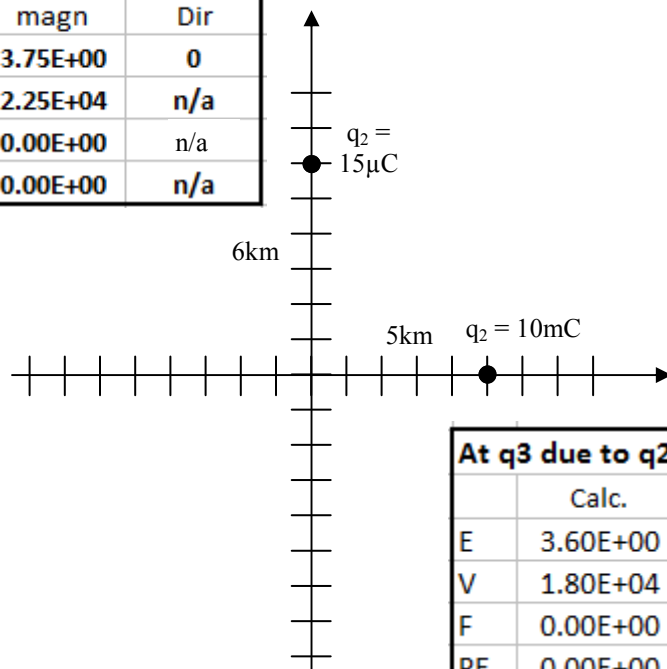
Page 2 individual calculated quantities, but not the net quantities, so you can check this intermediate stage;

Page 3 the net quantities.

Example 3) Find the net electrostatics field, force, potential, and potential energy at the origin due to the other two charges. There is no charge at the origin.

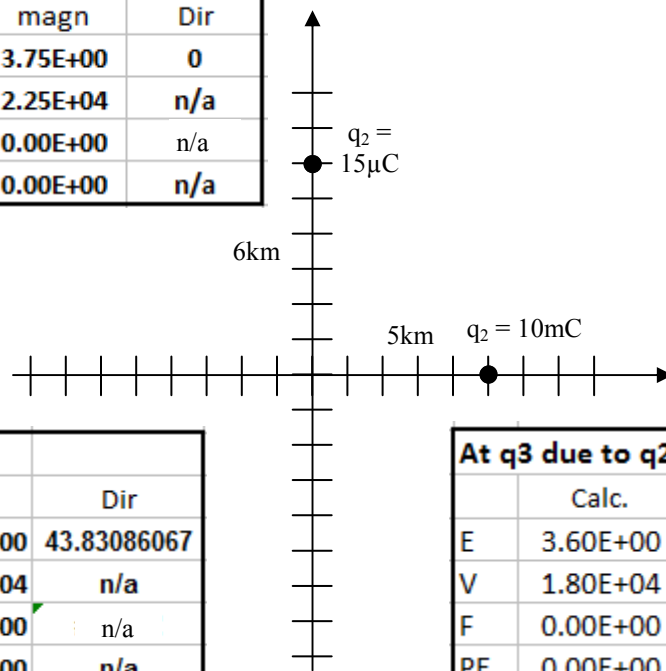


At q3 due to q1			
	Calc.	magn	Dir
E	3.75E+00	3.75E+00	0
V	2.25E+04	2.25E+04	n/a
F	0.00E+00	0.00E+00	n/a
PE	0.00E+00	0.00E+00	n/a



At q3 due to q2			
	Calc.	magn	Dir
E	3.60E+00	3.60E+00	90
V	1.80E+04	1.80E+04	n/a
F	0.00E+00	0.00E+00	n/a
PE	0.00E+00	0.00E+00	n/a

At q3 due to q1			
	Calc.	magn	Dir
E	3.75E+00	3.75E+00	0
V	2.25E+04	2.25E+04	n/a
F	0.00E+00	0.00E+00	n/a
PE	0.00E+00	0.00E+00	n/a



Net	magn	Dir
E	5.20E+00	43.83086067
V	4.05E+04	n/a
F	0.00E+00	n/a
PE	0.00E+00	n/a

At q3 due to q2			
	Calc.	magn	Dir
E	3.60E+00	3.60E+00	90
V	1.80E+04	1.80E+04	n/a
F	0.00E+00	0.00E+00	n/a
PE	0.00E+00	0.00E+00	n/a