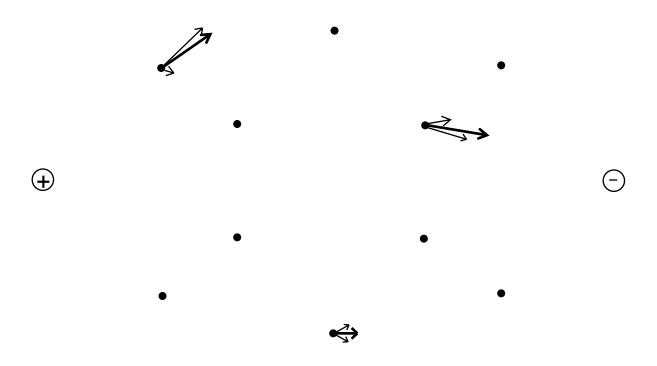
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## E & M Unit 1 - Works heet 4

1. In the field mapping exercise you calculated the electric force at various positions from a point charge. In the diagram below, the electric field vector has been determined at three locations. Using symmetry considerations, sketch the net electric field vector at the rest of the locations.



2. Draw the electric field lines around a **positively** charged plate as shown.

charge at various locations is released, what will happ	are shown below. Imagine that you could place a small positive test s on the lower surface of the positively charged plate. If this test charge pen to it? Where will it end up?  nk it will follow from different release locations. Draw at least six
	++++++++
positive test charge brough	electric field, but the charges that produce the field are hidden. If a ht into the region shows that all the field lines point <i>into</i> the hidden about the sign of the charge in that region? How do you know?
space.	detect the presence of and measure the strength of an electrical field in to detect the presence of an electric field at a location in space?
b) What do you need to r	neasure to determine the magnitude (strength) of the field?
	charge at various locations is released, what will happ. Trace the path that you this such paths.  Suppose you are given an positive test charge brough region, what can you say a suppose you are asked to a space.  a) What do you need to do

c) How should the size of the test charge compare to the amount of charge that produces the field?