

Physics 4BL

Quiz #4

Name _____

No credit will be given for correct answers if no indication of the reasoning is given, so show all your work. Partial Credit will be given for all attempts. Use a legible handwriting — if I can't read it, I can't grade it!

- 1) Three equal charges of amount Q are placed at the vertices of a square of side a as illustrated at the right. Determine:
- the total electric field (both magnitude and direction) produced by the three charges at point A . Make sure to draw electric field vectors and its components on the figure
 - the total electric potential produced by the three charges at point A
 - the Coulomb force at point A (both magnitude and direction) if there is a charge $-Q$ placed at A
 - given the value of $Q = 9.50 \text{ nC}$, a is 6.00 cm , find numerical values of electric field and force.


