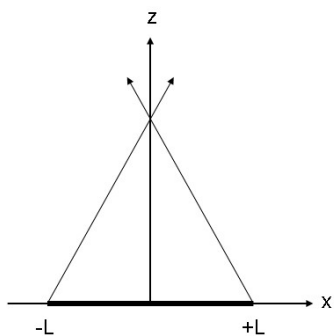姓名：_____　學號：_____　系級：_____

Problem 1 (50 %)

(1) Find the electric field a distance z above the midpoint of a straight line segment of length 2L, which carries a uniform line charge λ (30%); (2) Check the case z >> L (10%); (3)Also check the case L→∞ (10%)

Problem 2 (50 %)

(1) Find the electric field a distance z above the center of a square plane (side a) carrying uniform surface charge density σ (30%); (2) Check the cases as z→∞ (10%) and a→∞ (10%), respectively.