1.) (5pts) Use Green's theorem to evaluate \( \oint_C (x^2 + y^2)^{3/2} \, dx + (x^2 + y^2)^{3/2} \, dy \) along the closed path \( C \) given by \( x = 0, \quad x^2 + y^2 = 4, \quad x \leq 0 \).

2.) (5pts) Evaluate the surface integral \( \iint_S (2x + 4z) \, ds \), where \( S \) is the portion of the plane \( 2x + 3y + 4z = 12 \) in the first octant.