(1) Use Green’s theorem to evaluate \( \int_C (x^2 - y^2) \, dx + (2y - x) \, dy \), where \( C \) consists of the boundary of the region in the first quadrant that bounded by \( y = x^2 \) and \( y = x^3 \).

(2) Find a parametrization of the cylinder \((x - 4)^2 + y^2 = 16; 0 \leq z \leq 5\).

(3) Use Stokes theorem to compute the integral \( \iint_S \text{Curl} \, \mathbf{F} \cdot \mathbf{n} \, dS \), where \( \mathbf{F}(x, y, z) = \langle xz, yz, xy \rangle \) and \( S \) is the part of the sphere \( x^2 + y^2 + z^2 = 3 \) that lies inside the cylinder \( x^2 + y^2 = 2 \) and above the xy-plane.

(4) Evaluate \( \iint_S \mathbf{F} \cdot \mathbf{n} \, dS \), where \( \mathbf{F}(x, y, z) = \langle y, x, z \rangle \) and \( S \) is the boundary of the solid region enclosed by \( z = 1 - x^2 - y^2 \) and the plane \( z = 0 \).