Quiz 9

Time: 15 minutes

1. Compute the area of the region bounded by the ellipse $x^2/a^2 + y^2/b^2 = 1$.

2. Integrate the vector field (x^2, xy, z^2) along the segment of the helix $(\cos(t), \sin(t), t)$ between the points $(1, 0, 0)$ and $(1, 0, 2\pi)$.

Each problem is worth 6pts.