Name: _____ I.D. # _____ Sr. # _____

Consider the parametric curve defined by $x = \cos^3 t,\ \ y = \sin^3 t,\ \ 0 \le t \le \pi/2$,

(a) Find the slope of the curve at $t = \pi/4$.

(b) Find the length of the curve.

(c) Find the area of the surface generated by revolving the curve around the y-axis.