Assignment 7

The due date for submitting the assignment is Dec 06, 09 11:59 PM PST.

1. The length of the curve parameterized by $\mathbf{r}(t) = (t^2, \cos(t), \sin(t))$, $0 \leq t \leq \pi$ is:
   - $\frac{\pi}{2}
2. The length of the curve given by $\mathbf{r}(t) = (t^2, t^3, t)$, $0 \leq t \leq 1$ is:
   - $\frac{\sqrt{6}}{2}
3. The area of the surface generated by revolving the line segment $y = t$, $0 \leq t \leq 1$ around the $x$-axis is:
   - $\pi$