$\qquad$

To receive full credit you must show work.

1. [5 points] Evaluate $\int_{0}^{\pi / 4} \sec ^{3}(\theta) \tan ^{3}(\theta) d \theta$
2. [5 points] Evaluate $\int \frac{1}{t^{2} \sqrt{1-t^{2}}} d t$
