

1. (5 pts) Evaluate the integral

$$I = \int_0^1 \frac{3}{\sqrt{4-x^2}} dx$$

Hint: $(\sin^{-1} x)' = \frac{1}{\sqrt{1-x^2}}$.

2. (5 pts) Find the area of the region bounded by the curves $y = \sqrt{x-1}$ and $x - y = 1$.

Please fold the paper and write your NAME and UT EID clearly on the back.