7

DATE:

UI-

$$\int_0^{\pi} \sin^2 x \, dx$$

$$= \frac{1}{2} \int_0^{\pi} (1 - \cos 2x) \, dx$$

$$= \frac{1}{2} \left\{ (\pi - 0) + \left[\frac{1}{2} \sin 2x \right]_0^{\pi} \right\}$$

$$= \frac{1}{2} (\pi + 0)$$

$$= \pi/2$$