Taker Name: Sal B. GTID: 90 Section:

Grader #1: GTID: 90

§Prerequisite: Integral Calculus and Precalculus

Use the formula $\sin^2 t = \frac{1-\cos 2t}{2}$ to integrate. Show all steps [J] and use proper notation [N] for full credit.

$$\int \sin^2 t \, dt$$

$$\int \sin^2 t \, dt = \int \frac{1-\cos 2t}{2} \, dt$$

$$= \int \frac{1}{2} - \frac{1}{2}\cos 2t \, dt \quad (\tfrac{1}{2}\,du)$$

u-sub
$u = 2t$
$du = 2\,dt$
$\frac{1}{2}du = dt$

$$= \frac{1}{2}t - \frac{1}{4}\sin 2t + C$$

A	
J	
N	

G2:

A	
J	
N	

G3:

A	
J	
N	