

Solution and Rubric for Quiz 14 (Fri Nov 21)

Problem: Compute $\int_{-\pi/4}^0 3 \sec^2(x) dx$.

Solution: Notice that $3 \tan(x)$ is an antiderivative of $3 \sec^2(x)$. Therefore

$$\int_{-\pi/4}^0 3 \sec^2(x) = 3 \tan(x) \Big|_{-\pi/4}^0 = 3 \left(\tan(0) - \tan\left(-\frac{\pi}{4}\right) \right) = 3(0 - (-1)) = \boxed{3}$$

Rubric:

- If the final answer is correct (and is not left in the form $\tan(-\pi/4)$), and is supported by clear and correct work: $\boxed{2 \text{ points}}$
- Otherwise, if a correct antiderivative is computed: $\boxed{1 \text{ point}}$
- Otherwise: $\boxed{0 \text{ points}}$