

1. Evaluate the integral by a substitution

(f) $\int \frac{1 + \sin(3x)}{\cos(3x)} dx$

Answer:

$$\int \frac{1 + \sin(3x)}{\cos(3x)} dx = \frac{1}{3} \ln |\sec(3x) + \tan(3x)| - \frac{1}{3} \ln |\cos(3x)| + C$$