

$$\begin{aligned}\int 9 \tan^5 x \, dx &= 9 \int (\sec^2 x - 1)^2 \tan x \, dx \\ &= 9 \int \sec^4 x \tan x \, dx - 18 \int \sec^2 x \tan x \, dx + 9 \int \tan x \, dx \\ &= 9 \int \sec^3 x \sec x \tan x \, dx - 18 \int \tan x \sec^2 x \, dx + 9 \int \tan x \, dx \\ &= \frac{9}{4} \sec^4 x - 9 \tan^2 x + 9 \ln |\sec x| + C \\ &\quad [\text{or } \frac{9}{4} \sec^4 x - 9 \sec^2 x + 9 \ln |\sec x| + C]\end{aligned}$$