

1. Evaluate $\int_{\pi/2}^{3\pi/4} (\sin(x))^5 (\cos(x))^3 \, dx.$

2. Evaluate $\int (\tan(y))^3 \sec(y) \, dy.$

3. Evaluate $\int_0^{2\pi} (\cos(6\theta))^2 \, d\theta.$

4. Evaluate $\int \sec(x) \, dx.$

5. Evaluate $\int (\sec(x))^3 \, dx.$

6. Evaluate $\int \tan(x) \, dx.$

7. Evaluate $\int (\tan(x))^3 \, dx.$

8. Evaluate $\int (\cot(x))^5 \csc(x) \, dx.$