Evaluate the integral.

1. $\int \cos^3 x \sin x \, dx$

3. $\int \sin^2 5\theta \, d\theta$

9. $\int \sin^2 t \cos^3 t \, dt$

11. $\int \sin^2 x \cos^2 x \, dx$

13. $\int \sin 2x \cos 3x \, dx$

19. $\int_0^{\pi/3} \sin^4 3x \cos^3 3x \, dx$

21. $\int_0^{\pi/6} \sin 4x \cos 2x \, dx$

31. $\int \tan 4x \sec^4 4x \, dx$

33. $\int \sec^5 x \tan^3 x \, dx$

35. $\int \tan^4 x \sec x \, dx$

49. $\int \cot^3 x \csc^3 x \, dx$