

Integrate.

1.) $\int \cos^2 7x \, dx$

2.) $\int \sin^3 3x \cos 3x \, dx$

3.) $\int \cos^5 9x \sin 9x \, dx$

4.) $\int \sin^3 x \, dx$

5.) $\int \sin^3 x \cos^3 x \, dx$

6.) $\int \tan 4x \sec^2 4x \, dx$

7.) $\int (\sec x \tan x)^2 \sqrt{1 + \tan x} \, dx$

8.) $\int \tan^2 x \sec^4 x \, dx$

9.) $\int \tan^3 x \, dx$

10.) $\int \tan^3 x \sec x \, dx$

11.) $\int \csc^4 5x \cot 5x \, dx$

12.) $\int \cot^3 10x \, dx$

13.) Determine the area of the region bounded by the graphs of $x = y^3$ and $x = 2y - y^2$.