

Unit 4: Integration
4.7 Integration By Substitution

*used to integrate composite functions

ex.

$$\int x^2 (2x^3 + 2)^3 dx$$

ex.

$$\int x^3 \sqrt{1 + x^2} dx$$

Extend to definite integrals as well:

ex.

$$\int_0^1 x(x^2 + 1)^3 dx$$

ex.

$$\int_0^{\pi/2} \sin^2 x \cos x dx$$

Practice Questions

Pg. 296/# 7 – 17, 27, 29, 33 – 36, 45, 47 – 50, 54 – 58, 60 – 62, 65 – 67



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