

5.5 Integration by Substitution

Name:

Date: June 18, 2015

P 6. Find

$$\int 2x(x^2 - 9)^3 dx$$

P 8. Find

$$\int -8x\sqrt[3]{3 - 4x^2} dx$$

P 10. Find

$$\int x^2(6 - x^3)^5 dx$$

P 14. Find

$$\int t^3 \sqrt{2t^4 + 3} dt$$

P 16. Find

$$\int u^2 \sqrt{u^3 + 2} du$$

P 18. Find

$$\int \frac{x^3}{(1 + x^4)^2} dx$$

P 20. Find

$$\int \frac{6x^2}{(4x^3 - 9)^3} dx$$

P 22. Find

$$\int \frac{x^3}{\sqrt{1+x^4}} dx$$

P 24. Find

$$\int x^2 + \frac{1}{(3x)^2} dx$$

P 34. Find

$$\int \sin 4x \, dx$$

P 36. Find

$$\int \csc^2 \left(\frac{x}{2} \right) \, dx$$

P 40. Find

$$\int \sqrt{\tan x} \sec^2 x \, dx$$

P 42. Find

$$\int \frac{\sin x}{\cos^3 x} dx$$

P 44. Find

$$\int (x + 1)e^{x^2+2x} dx$$

P 46. Find

$$\int \frac{2e^x - 2e^{-x}}{(e^x + e^{-x})^2} dx$$

P 48. Find

$$\int \frac{e^{2x} + 2e^x + 1}{e^x} dx$$

P 50. Find

$$\int e^{\tan(2x)} \sec^2(2x) dx$$

P 54. Find

$$\int (3 - x)7^{(3-x)^2} dx$$

P 62. Find

$$\int x\sqrt{3x-4} \, dx$$

P 66. Find

$$\int \frac{2x+1}{\sqrt{x+4}} \, dx$$

P 70. Find

$$\int_0^1 x^3(2x^4+1)^2 \, dx$$

P 75. Find

$$\int_1^9 \frac{1}{\sqrt{x}(1+\sqrt{x})^2} dx$$

P 78. Find

$$\int_1^2 e^{1-x} dx$$