

Math 112: Calculus B
Indefinite Integrals

Basic Properties

1. Evaluate $\int(x^2 + 3x - 1) dx$

2. Evaluate $\int(2 \cos(x) - \frac{\sin(x)}{2}) dx$

3. Evaluate $\int(\frac{x+1}{\sqrt{x}}) dx$

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u-substitution

1. Evaluate $\int \left(\frac{1}{\sqrt{5-2x}}\right) dx$

2. Evaluate $\int \sin(3x + 2) dx$

3. Evaluate $\int (x\sqrt{x^2 + 1}) dx$

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Definite Integrals

u-substitution

1. Evaluate $\int_0^1 \frac{1}{(3-2x)^2} dx$

2. Evaluate $\int_{\frac{\pi}{2}}^{\pi} \cos(5 - 2x) dx$

3. Evaluate $\int_1^e \frac{\ln(x)}{x} dx$

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Indefinite Integrals

More complicated u-substitution

1. Evaluate $\int (x\sqrt{4+x}) dx$

2. Evaluate $\int (x^5\sqrt{1+x^2}) dx$