

Math 1220 #13

Strategies for Integrating

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1. u-substitution
2. integration by parts
3. trigonometric integrals (use identities)
4. rationalizing/trigonometric substitutions
5. partial fraction decomposition
6. integral tables
7. computer/calculator approximations

EX 1

$$\int \frac{1}{t - \sqrt{2t}} dt$$

EX 2

$$\int \frac{\sqrt{x^2 - 4x}}{x - 2} dx$$

EX 3

$$\int \frac{\sec h(\sqrt{x})}{\sqrt{x}} dx$$

EX 4

$$\int x^2 \sqrt{25 - 4x^2} dx$$