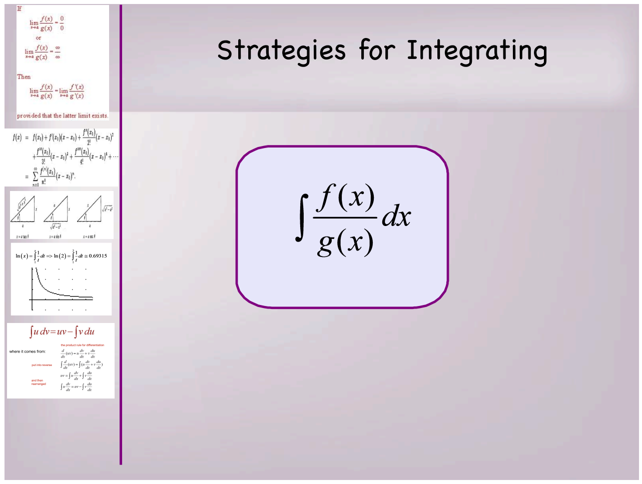

<u>Strategies for Integration</u>

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 $\int \frac{\operatorname{sec}h\left(\sqrt{x}\right)}{\sqrt{x}}\,dx$

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