Calculus II
Chapter 8 Test Review

For the review, the problems on the test won't look like these but will use the same techniques as you see demonstrated here.

Instructions: Only use integration by table on the problems that say to use that method

1. Find $\int\left(\sec^4\frac{x}{2}\right)dx$

2. Find the following by trig substitution: $\int\left(\sqrt{25-9x^2}\right)dx$

3. Using integration by parts, find: $\int\left(\sin(3x)e^x\right)dx$

4. Using integration by parts "table method", find: $\int\left(x^5e^x\right)dx$

5. Using partial fractions, find: $\int\left(\frac{6x}{x^2+3x-18}\right)dx$

6. Using integration by tables: $\int\left(\frac{1}{5x^2\sqrt{3+4x^2}}\right)dx$

7. Find: $\int\left((\sin x+\cos x)^2\right)dx$

8. Find: $\int\left(\frac{\csc\sqrt{2x}}{\sqrt{x}}\right)dx$

9. Using L'Hopital's Rule, find: $\lim_{x\to 0}\frac{\sin\pi x}{\sin 5\pi x}$

10. Evaluate: $\int_1^\infty\left(\frac{\ln x}{x^2}\right)dx$