The problems on this worksheet are for in-class practice during tutorial. You are free to collaborate and to ask for help. They don't count for course credit, but it's a good idea to make sure you know how to do everything before you leave tutorial – similar problems may show up on a test or assignment.

Evaluate the following integrals:

1. $\displaystyle\int \frac{x^2 - 11}{x}\, dx$

2. $\displaystyle\int \frac{x}{\sqrt{x^2 - 3}}\, dx$

3. $\displaystyle\int x^2\sqrt{1 - x^2}\, dx$

4. $\displaystyle\int \frac{1}{(x^2 + 4x + 13)^2}\, dx$

5. $\displaystyle\int \frac{x^2}{\sqrt{x^2 + 4}}\, dx$

6. $\displaystyle\int \frac{7x + 7}{x^2 + 3x - 10}\, dx$

7. $\displaystyle\int \frac{7x - 2}{x^2 + x}\, dx$

8. $\displaystyle\int \frac{x + 7}{(x + 5)^2}\, dx$

9. $\displaystyle\int \frac{9x^2 + 11x + 7}{x(x + 1)^2}\, dx$

10. $\displaystyle\int \frac{x^3}{x^2 - x - 20}\, dx$ (First do long division.)

11. $\displaystyle\int \frac{1}{x^3 + 2x^2 + 3x}\, dx$

12. $\displaystyle\int \frac{2x^2 + 2x + 1}{(x + 1)(x^2 + 9)}\, dx$