Books, notes, and calculators *are* allowed. You <u>are</u> allowed to work with each other and to get help from the tutors, but you cannot get help from me. ***You must show all your work.*** [Scores will be scaled to 15 points after grading.]

Evaluate the following integrals.

1. (10 pts) $\displaystyle\int \frac{3x^3 + 4x + 4}{x^4 + 4x^2}\,dx$

2. (10 pts) $\displaystyle \int \frac{1}{x^2\sqrt{4x^2+1}}\, dx$

3. (10 pts) $\displaystyle \int_0^{\pi/3} (\cos x + \sin x)^2 \cos 2x \, dx$