Math 1552, Integral Calculus

Sections 8.2, 8.3: Integration by Parts/Powers and Products of Trig Functions

Evaluate the following integrals using any of the integration techniques we have learned.

1. $\int \sin^5(2x)\cos^3(2x)dx$

2. $\int_1^e \frac{\sqrt{\ln x}}{x}dx$

3. $\int (\ln x)^2 dx$

4. $\int x^3 e^{x^2}\,dx$

5. $\int \tan^4(x)\,dx$

6. $\int x^2 \cdot 4^x\,dx$