

# Math 1b. Integration by Parts

Spring 2006

Evaluate each of the following integrals

1.  $\int x \cos 2x \, dx$

2.  $\int \frac{\ln x}{x^2} \, dx$

3.  $\int_{-1}^{1/\sqrt{2}} x^2 \arctan x \, dx.$

4.  $\int x^2 \sin x \, dx$

5.  $\int e^x \sin x \, dx$

6.  $\int x e^x \sin x \, dx$

7.  $\int_1^e x^2 \ln x \, dx$