

**Integration Review**

(1)  $\int \sin x - \cos x + 1 \, dx.$

(2)  $\int x + \frac{1}{x} \, dx.$

(3)  $\int_1^8 x \sqrt[3]{x-1} \, dx.$

(4)  $\int_0^2 \frac{5x}{x^2+5} \, dx.$

**Integration by Parts**

(1)  $\int t \sin(t) dt.$

(2)  $\int_4^9 \frac{\ln y}{\sqrt{y}} dy.$

(3)  $\int e^{2x} \sin(x) dx.$

(4)  $\int \tan^{-1}(x) dx.$