

Area of a region between Two Curves

$$\int_a^b [f(x) - g(x)] dx$$

Find the area of the region bounded by  $f(x)=x$ ,  $g(x)=2x^2+4$ ,  $x=0$  and  $x=2$ .

$$\int_2^0 [2x^2 + 4 - (x)] dx$$

$$\left. \frac{2x^3}{3} + 4x - \frac{x^2}{2} \right|_0^2$$