

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 $x=2$.

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

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