Area Between Curves

If f and g are continuous functions such that $f(x) \geq g(x)$ on $[a,b]$, then area between the

curves is $\displaystyle\int_a^b [f(x) - g(x)]\,dx$ or $\displaystyle\int_a^b [top - bottom]\,dx$ or $\displaystyle\int_c^d [right - left]\,dy$.