

7.2 Areas in the Plane

If x is the independent variable, use $\int_a^b (f(x) - g(x)) dx$

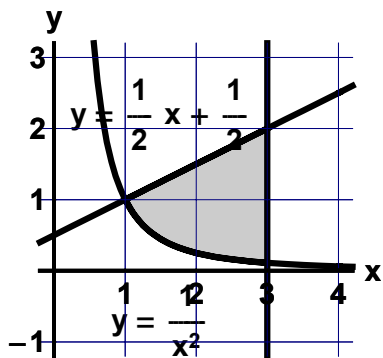
where the area starts at $x = a$, stops at $x = b$, $f(x)$ is on top and $g(x)$ is on the bottom (think top minus bottom)

If y is the independent variable, use $\int_c^d (f(y) - g(y)) dy$

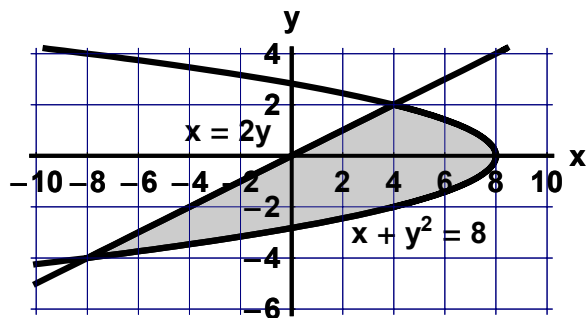
where the area starts at $y = c$, stops at $y = d$, $f(y)$ is on the right and $g(y)$ is on the left (think right minus left)

For problems 1 – 8, find the area of the shaded region.

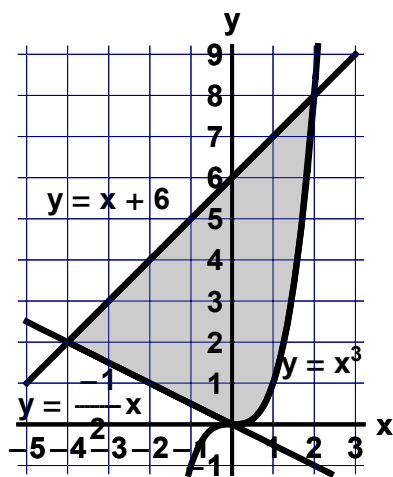
1.



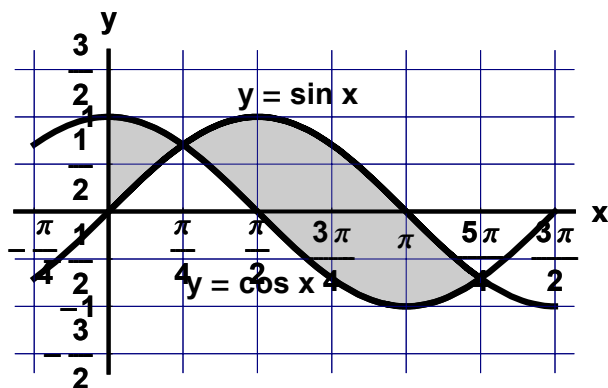
2.



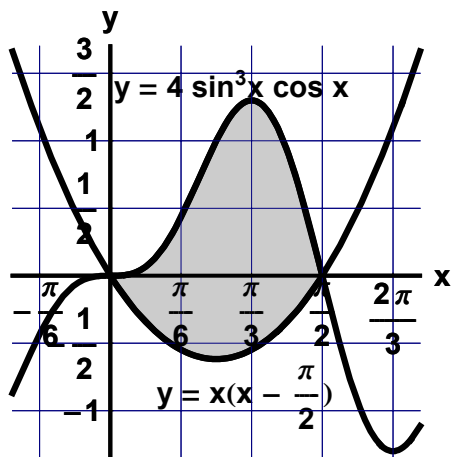
3.



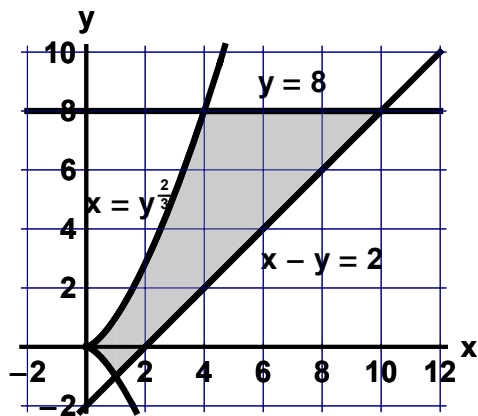
4.



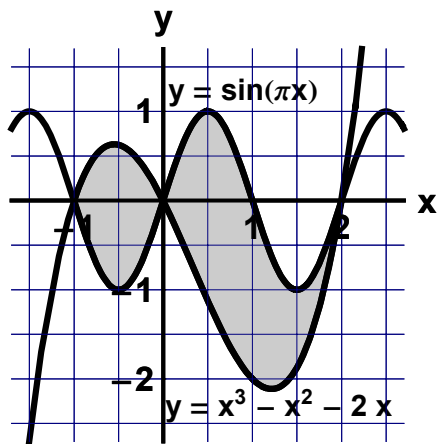
5.



6.



7.



8.

