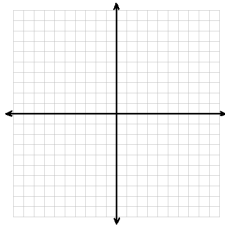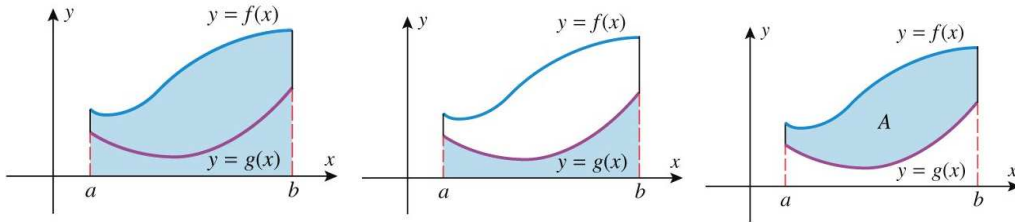# Area Between Two Curves (Calculus Section 6.1)

Warm up: Sketch $y = \sqrt{x}$

Area Between Curves

Area Between Two Curves Formula

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

Example 1: Find the area of the region bounded above by $y = x + 6$, bounded below by $y = x^2$, and bounded on the sides by the lines $x = 0$ and $x = 2$.
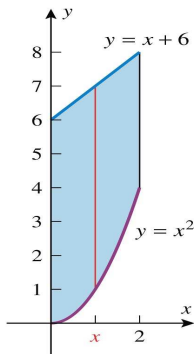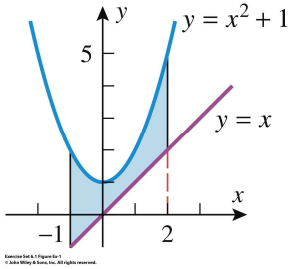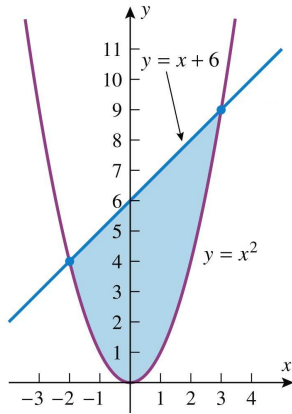
Area Between Two Curves (Calculus Section 6.1)

Practice Problem 1: Find the area of the shaded region.

Example 2: Find the area of the region that is enclosed between the curves $y = x^2$ and $y = x + 6$.

Practice Problem 2: Find the area of the shaded region.