C12 - 5.4 - Int Def/Area/Bet/Vol/xyAxis

Find the Area between the curve $y = x^2$ and the x- axis $0 \le x \le 1$.

Find the Area between the curve $y = \sqrt{x}$ and the x- axis $0 \le x \le 4$.

Find the Area between the curve $y = x^2 - x$ and the x- axis $0 \le x \le 2$.

Find the Area between the curve $y = \cos(\frac{1}{2}x)$ and the x- axis $0 \le x \le \pi$.

Find the Area below the curve $x^2 + y^2 = 4$ and above the x- axis.

Find the Area between the curve $y = |x^2 - 4|$ and the x- axis $-3 \le x \le 3$.

Find the area between the curves $y = x \ \& \ y = x^2$

Find the Volume of revolution
$y = x$
$0 \le x \le 4$

Find the Volume of revolution between the two functions $y = \sqrt{x} \ \& \ y = \frac{1}{2}x, 0 \le x \le 4$, around the x-axis.

Find the Volume of revolution between the two functions $y = x + 2 \ \& \ y = 2, 0 \le x \le 4$, around the axis $y = 1$.

Find the area between the curves $y = x^2 \ \& \ y = 4$

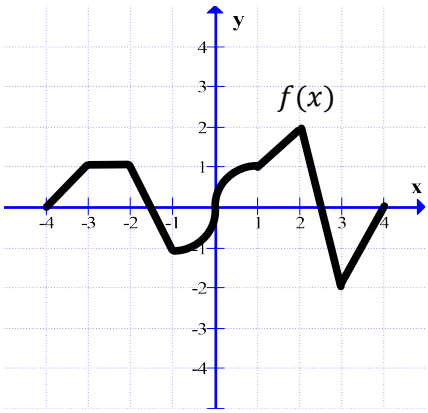
Find the Volume of revolution between the two functions $y = x^2 \ \& \ y = 2x$ around the y-axis.

C12 - 5.4 - Int Info/Graph/Ave Rev

$\int_0^2 f(x)\,dx = 2$ $\int_2^3 f(y)\,dy = -1$ $\int_0^3 g(x)\,dx = 4$

$\int_2^0 f(x)\,dx = ?$ $\int_1^1 \frac{1}{2} f^2(x)\,dx = ?$

$\int_0^3 f(x)\,dx = ?$ $\int_0^3 (f(x) + 2g(x))\,dx = ?$



A function $f(x)$ consists of straight lines and quarter circles.

Find the average value over the interval and where it occurs.

$y = 4 - x^2, 0 \le x \le 2$

$y = \sqrt{9 - x^2}, -3 \le x < 3$

$\int_{-4}^0 f(x)\,dx = ?$ $\int_0^2 f(x)\,dx = ?$

$\int_2^4 f(x-1)\,dx = ?$ $\int_2^4 f(2x)\,dx = ?$