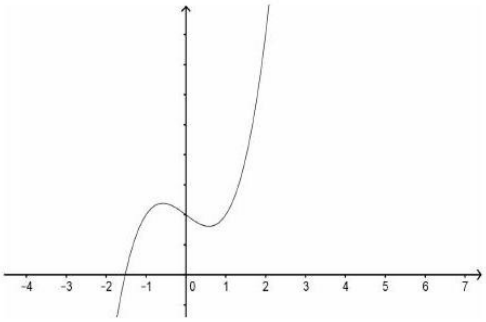
Math 1210 #29
Area of a Plane Region

$A =$ The area between a curve, $f(x)$, and the x-axis from $x = a$ to $x = b$ is found by

$$\int_a^b f(x)dx$$

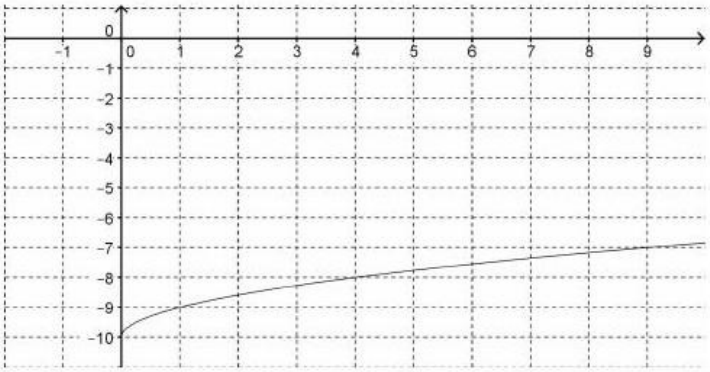
EX 1

Find the area of the region between the function and the x-axis on the x-interval $[-1,2]$. $f(x) = x^3 - x + 2$



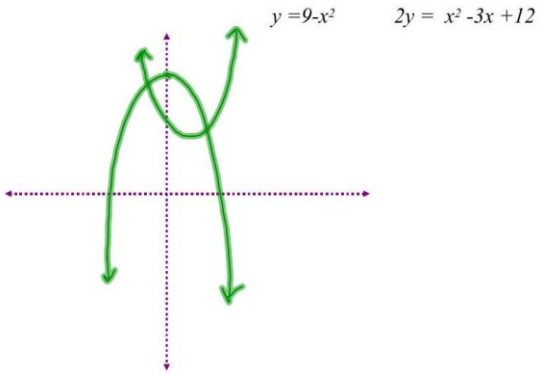
EX 2

Find the area between $y = \sqrt{x} - 10$ and $y = 0$ between $x = 0$ and $x = 9$.



EX 3

Find the area between these two curves.



EX 4

Find the area of the region bounded by these two curves.

$x = y^2 - 2y$ $\quad\quad$ $x - y - 4 = 0$