Kuta Software - Infinite Calculus Name_____

Area Between Curves

Date_____ Period____

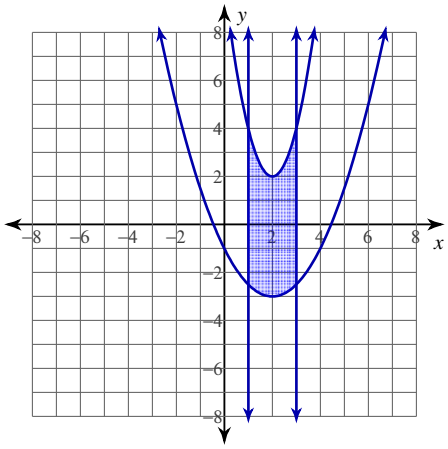
For each problem, find the area of the region enclosed by the curves.

1) $y = 2x^2 - 8x + 10$

$y = \frac{x^2}{2} - 2x - 1$

$x = 1$

$x = 3$

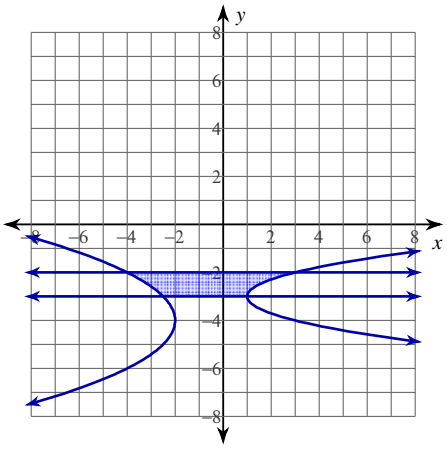


2) $x = 2y^2 + 12y + 19$

$x = -\frac{y^2}{2} - 4y - 10$

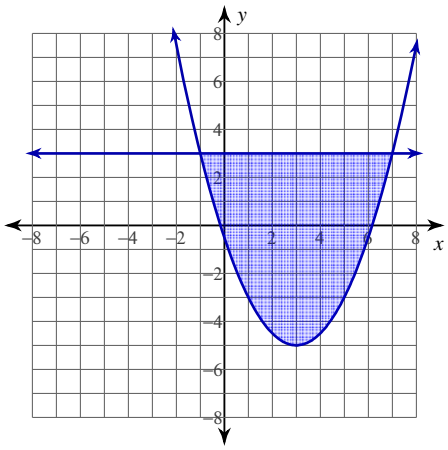
$y = -3$

$y = -2$



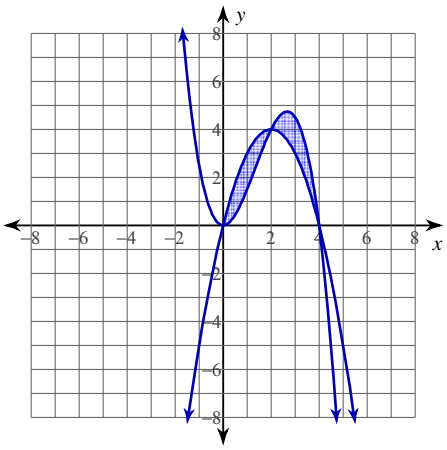
3) $y = \frac{x^2}{2} - 3x - \frac{1}{2}$

$y = 3$



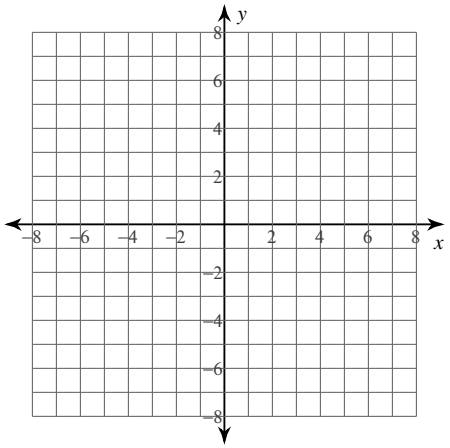
4) $y = -\frac{x^3}{2} + 2x^2$

$y = -x^2 + 4x$

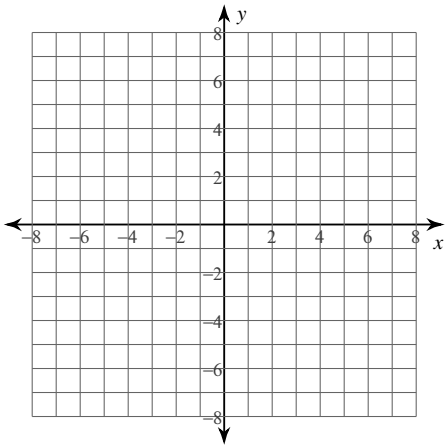


For each problem, find the area of the region enclosed by the curves. You may use the provided graph to sketch the curves and shade the enclosed region.

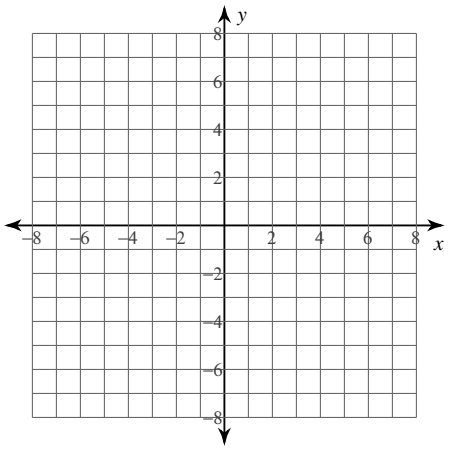
5) $y = -2x^2 - 1$
$y = -x + 3$
$x = 0$
$x = 1$



6) $y = 2\sqrt[3]{x^2}$
$y = x$



7) $y = -x^3 + 6x$
$y = -x^2$



8) $y = -2 \cdot \sec^2 x$
$y = 2\cos x$
$x = 0$
$x = \dfrac{\pi}{4}$