Calculus   Name_____
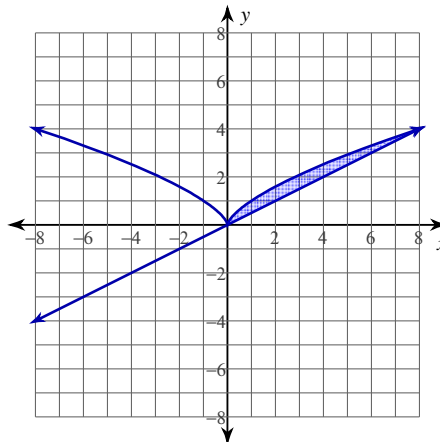
Area Between Curves Practice   Date_____ Period_____
For each problem, find the area of the region enclosed by the curves.
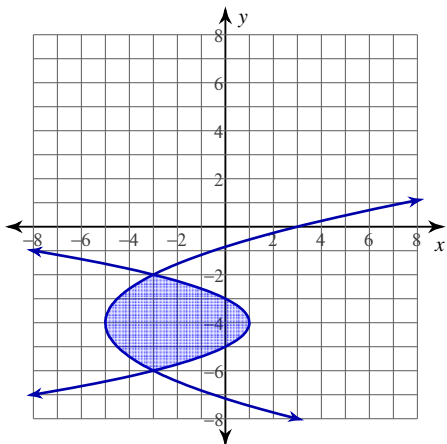
1) $y = -\sqrt{x}$
   $y = 2\sqrt{x}$
   $x = 0$
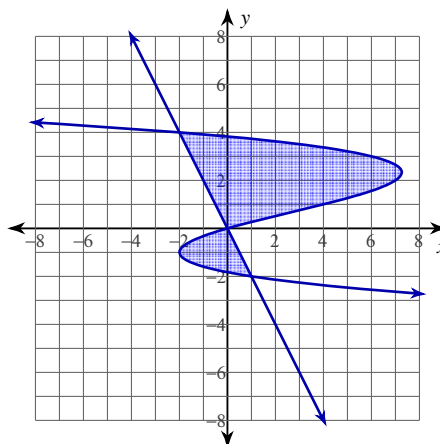 $x = 4$

2) $y = \sqrt[3]{x^2}$
   $y = \dfrac{1}{2}x$

3) $x = -y^2 - 8y - 15$
   $x = \dfrac{y^2}{2} + 4y + 3$

4) $x = -\dfrac{y^3}{2} + y^2 + \dfrac{7y}{2}$
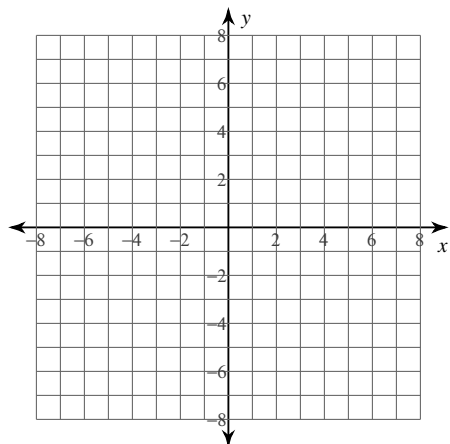 $x = -\dfrac{y}{2}$

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.

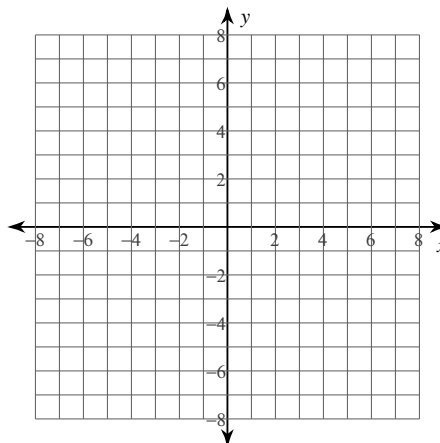5) $y = \dfrac{x^2}{2} - 2x$

$y = -\dfrac{x}{2} + 2$
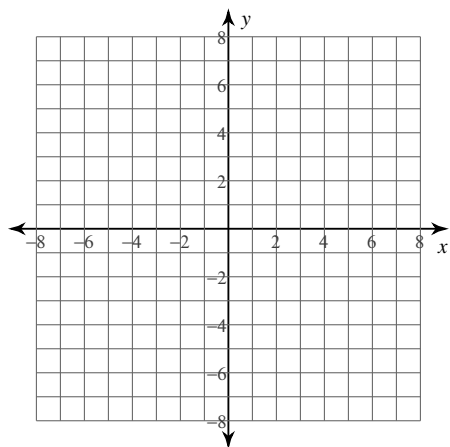
$x = 2$

$x = 6$

6) $y = 2\sqrt{x}$

$y = \dfrac{x^2}{4}$

7) $x = \dfrac{y^2}{2} - 6$

$x = -4$

$y = -5$

$y = 0$

8) $x = y^3 - 6y$

$x = y^2$