## Worksheet for Sections 6.1 - 6.2

1. Find the area of the region enclosed by  $y = x + \frac{4}{x^2}$ , the x-axis, x = 2, and x = 4.



2. Find the area of the region enclosed by  $y = 4x - x^2$ , and y = 3.



3. Find the area of the region enclosed by  $y = x^2 - 4x$  and  $y = 16 - x^2$ .



4. Find the area of the region enclosed by  $x = y^2 - 4y$  and x = y.



5. Find the area of the region enclosed by  $y = 3 - x^2$  and y = -x + 1 between x = 0 and x = 2.



## Worksheet for Sections 6.1 – 6.2

6. Find the area of the region enclosed by  $y = x^2 - 4x$  and  $y = 2x - x^2$ .



7. Find the area of the region enclosed by  $x = y^2 - 4y + 2$  and x = y - 2.



8. Find the area of the region enclosed by  $y = 2x - x^2$  and y = -3.



9. Find the area of the region enclosed by  $x = 3y - y^2$  and x + y = 3.



10. Use the disk method to find the volume of the solid that results when the area of the region enclosed by  $y = x^2$ , x = 0, and y = 4 is revolved about the y-axis.



## Worksheet for Sections 6.1 - 6.2

11. Find the volume of the solid that results when the area of the region enclosed by x + y = 4, y = 0, and x = 0 is revolved about the x-axis.



12. Use the washer method to find the volume of the solid that results when the area of the region enclosed by  $y = \sqrt{x}$ , y = 0, and x = 9 is revolved about the y-axis.



13. Use the washer method to find the volume of the solid that results when the area of the region enclosed by  $y^2 = 4x$ , y = 2, and x = 4 is revolved about the x-axis.



14. Use the washer method to find the volume of the solid that results when the area of the region enclosed by  $y = 4 - x^2$ , and y = x + 2 is revolved about the x-axis.



15. Use the washer method to find the volume of the solid that results when the area of the region enclosed by  $y = x^2$ , y = 4, and x = 0 is revolved about the x=axis.

