

## 8.10 Disc Method: Revolve Around Other Axes

Calculus

Name: \_\_\_\_\_

**CA #2**

Setup the integral that gives the volume of the solid formed from revolving the bounded region about the given line. Set up the integral, but do not evaluate.

1.  $y = 3 - x^2$  and  $y = -1$  about the line  $y = -1$ .

2.  $x = y^2 + 3$ ,  $x = 1$ ,  $y = -2$ ,  $y = 1$  about the line  $x = 1$ .

3.  $x = \sqrt{y}$ ,  $y = 4$ ,  $x = -1$ ,  $y = 1$  about the line  $x = -1$ .

4.  $y = \sqrt{x} + 1$ ,  $y = 1$  and  $x = 4$  about the line  $y = 1$ .

5.  $x = 3 - y^2$ ,  $x = 2$  about the line  $x = 2$ .

6.  $y = x^2 + 2$ ,  $y = 2$  and  $x = 2$  about the line  $y = 2$ .

$4. \int_0^4 \pi x^2 dx$	$5. \int_{-1}^1 \pi(1 - y^2)^2 dy$	$6. \int_2^0 \pi x^4 dx$
$1. \int_2^{-2} \pi(4 - x^2)^2 dx$	$2. \int_1^2 \pi(y^2 + 2)^2 dy$	$3. \int_4^1 \pi(\sqrt{y} + 1)^2 dy$