

8.10 Disc Method: Revolve Around Other Axes

Calculus

Name: _____

CA #1

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. $y = 2x^2$, $x = 2$, $y = 0$ about the line $x = 2$.

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

3. $y = x^2$ and $y = 4$ and revolve about the line $y = 4$.

4. $y = x$, $y = 0$, $x = 6$ and revolve about the line $x = 6$.

5. $y = x - 1$, $y = 3$ and $x = 6$ and revolve about the line $y = 3$.

6. $y = \sqrt{x}$, $x = 0$, $x = 9$, $y = -2$ about the line $y = -2$.

$4. \int_0^6 \pi (y - 6)^2 dy$	$5. \int_0^4 \pi (x - 4)^2 dx$	$6. \int_0^2 \pi (\sqrt{x} + 2)^2 dx$
$1. \int_0^8 \pi \left(\sqrt{\frac{x}{2}} - 2 \right)^2 dx$	$2. \int_{-2}^1 \pi (-2 + \sqrt{y})^2 dy$	$3. \int_2^4 \pi (4 - x^2)^2 dx$

Answers to 8.10 CA #1