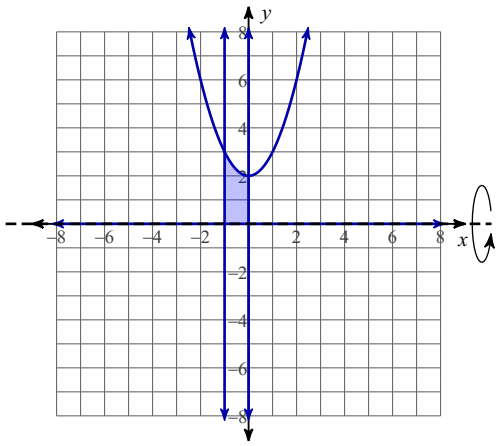
Calculus AB Name_____

Worksheet 17 - Solids of Revolution with Disks

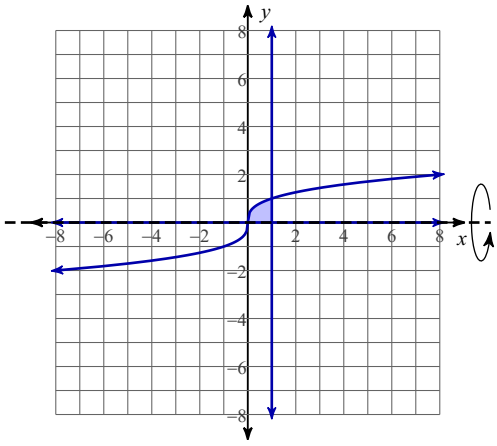
Period____

For each problem, find the volume of the solid that results when the region enclosed by the curves is revolved about the the *x*-axis.

1) $y = x^2 + 2,\ y = 0,\ x = -1,\ x = 0$

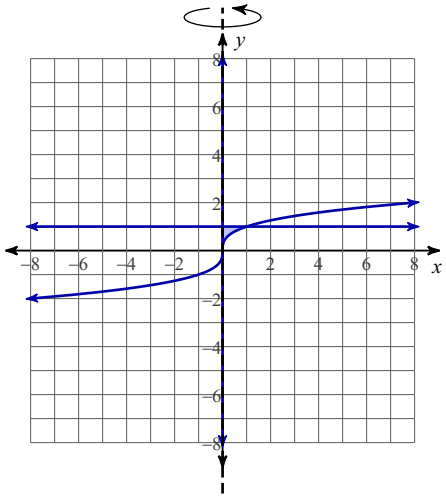


2) $y = \sqrt[3]{x},\ y = 0,\ x = 1$

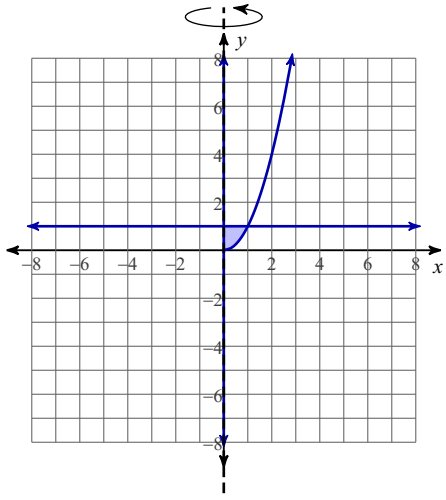


For each problem, find the volume of the solid that results when the region enclosed by the curves is revolved about the the *y*-axis.

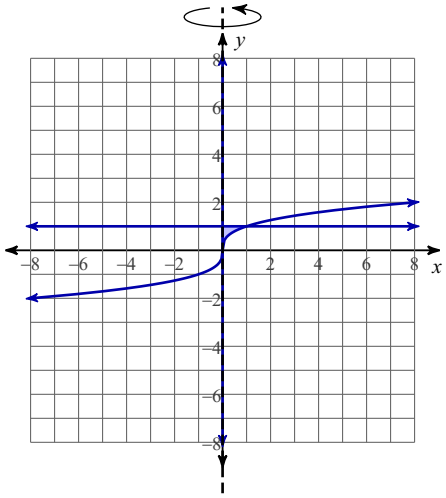
3) $x = y^3,\ x = 0,\ y = 1$



4) $x = \sqrt{y},\ x = 0,\ y = 1$



5) $y = 1,\ y = \sqrt[3]{x},\ x = 0$



For each problem, find the volume of the solid that results when the region enclosed by the curves is revolved about the the *x*-axis.

6) $y = x^2 + 3,\ y = 0,\ x = -1,\ x = 1$

7) $y = -x^2 + 1,\ y = 0$

8) $y = -x^2 + 1,\ y = 0,\ x = 0,\ x = 1$

For each problem, find the volume of the solid that results when the region enclosed by the curves is revolved about the the *y*-axis.

9) $x = -y^2 + 4,\ x = 0$

10) $x = y^2 + 3,\ x = 0,\ y = 0,\ y = 2$