Name _____ Date _____

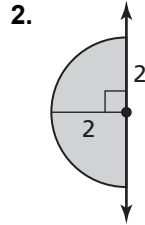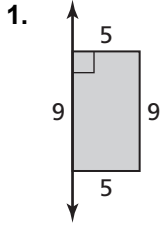## 1.4 Practice A

**In Exercises 1–3, sketch the solid produced by rotating the figure around the given axis. Then identify and describe the solid.**

1.

2.

3.
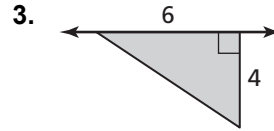
In Exercises 4–6, sketch the solid of revolution. Then identify and describe the solid.

4. a square with side length 1 rotated around one side

5. a right triangle with legs of length 3 and 7 rotated around its shorter leg

6. a semicircle with radius 8 rotated around its diameter

In Exercises 7 and 8, sketch and describe the solid produced by rotating the figure around the given axis. Then find its surface area and volume.

7.

8.
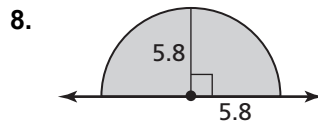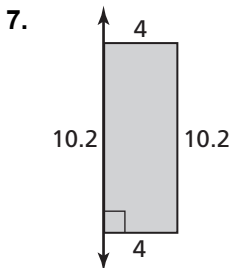
9. The figure shows the graph of a function f on an interval $[a, b]$. Sketch the solid produced when the region enclosed by the graph of f and the equations $x = a, x = b,$ and $y = 0$ is rotated around the x-axis.