

## 2 - VOLUMES OF REVOLUTION

Find the volume of each when first revolved over the x-axis and the y-axis.

$$y = \sqrt{x}$$

1.  $y = 4$   
 $x = 0$

$$y = x^2 + 1$$

2.  $x = 0$   
 $y = 0$   
 $x = 2$

$$y = x^2$$

3.  $y = -x + 2$   
 $y = 0$

$$y = x^2$$

4.  $x = 2$   
 $y = 0$

$$y = 2^x$$

5.  $y = 2$   
 $x = 0$

$$y = x$$

6.  $y = 3 - 2x$   
 $x = 0$

$$y = e^x$$

7.  $y = 0$   
 $x = 0$   
 $x = 2$

Answers

- 128pi, 1024/5pi
- 206/15pi, 9pi
- 8/15pi, 11pi/6
- 32/5pi, 8pi
- 1.836pi, .392pi
- 4pi, pi
- 26.799pi, 16.729pi

## 2 - VOLUMES OF REVOLUTION

Find the volume of each when first revolved over the x-axis and the y-axis.

$$y = \sqrt{x}$$

1.  $y = 4$   
 $x = 0$

$$y = x^2 + 1$$

2.  $x = 0$   
 $y = 0$   
 $x = 2$

$$y = x^2$$

3.  $y = -x + 2$   
 $y = 0$

$$y = x^2$$

4.  $x = 2$   
 $y = 0$

$$y = 2^x$$

5.  $y = 2$   
 $x = 0$

$$y = x$$

6.  $y = 3 - 2x$   
 $x = 0$

$$y = e^x$$

7.  $y = 0$   
 $x = 0$   
 $x = 2$

Answers

- 128pi, 1024/5pi
- 206/15pi, 9pi
- 8/15pi, 11pi/6
- 32/5pi, 8pi
- 1.836pi, .392pi
- 4pi, pi
- 26.799pi, 16.729pi