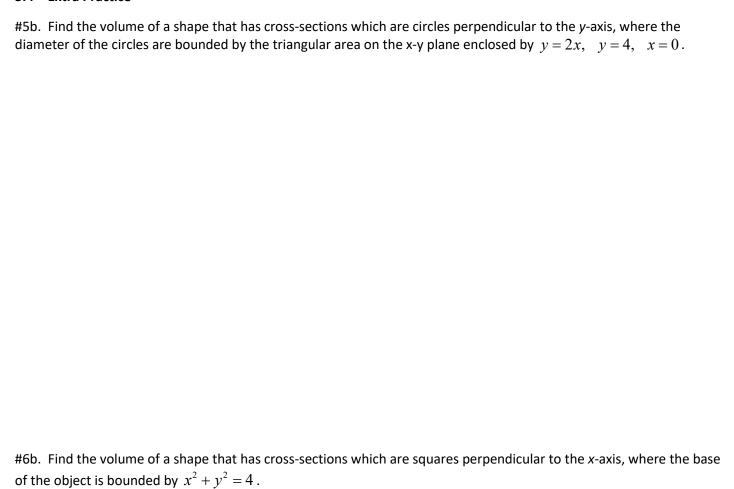
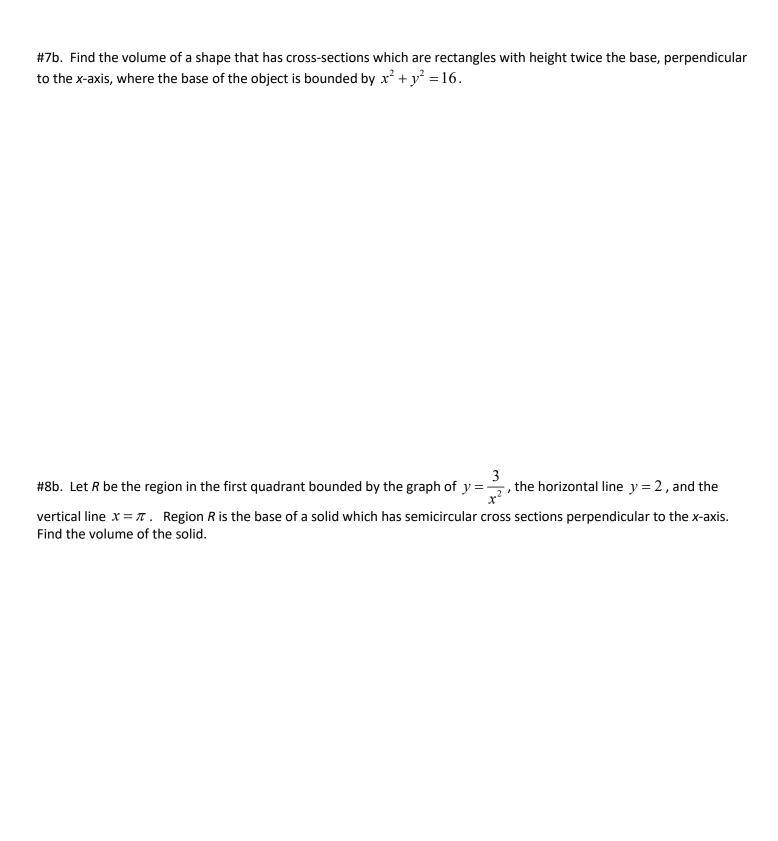
AP Calculus BC – Unit 5, Part 2 Extra Practice







5.5 – Extra Practice

Find the arc length of the curve over the given interval.

#7b.
$$y = -2x^3 + x - 5$$
 $-1 \le x \le 5$

#8b.
$$y = \ln(x) + 8$$
 $3 \le x \le 7$

#9b.
$$x = y^3 - 2y^2 + 2$$
 $-1 \le y \le 3$

#10b.
$$x^2 + 2x + y^2 + 8y = 32$$
 for $x \ge 3$

Find the surface area of the surface formed by rotating the portion of the curve indicated around the indicated axis.

#11b. The portion of curve y = -3x + 6 bounded by x = 0, y = 0 rotated around the y - axis

#12b. The portion of curve $y = x^2$ bounded by x = 4, y = 0 rotated around the x-axis

#13b. The portion of curve $y-6=x^2+7x$ bounded by y=0 rotated around the x-axis

5.6 – Extra Practice

- Find a) the average value of the function over the interval and
 - b) the average rate of change of the function over the interval

For this homework evaluate the integrals by hand

#6b.
$$y = 5x + 3$$

$$1 \le x \le 6$$

#7b.
$$y = \frac{1}{x}$$
 $2 \le x \le 10$

$$2 \le x \le 10$$