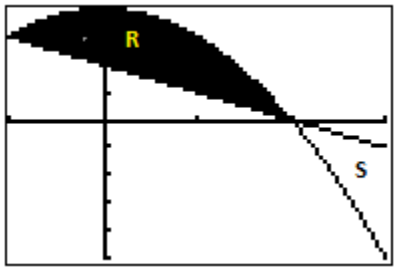
Review Chapter 7 AP style



X[-1, 3]$_1$ and Y[-5, 4]$_1$

1. Let f and g be the functions given by $f(x) = 4 - x^2$ and $g(x) = -x + 2$. Let R be the shaded region enclosed by the graphs of f and g, and let S be the shaded region in the fourth quadrant enclosed by the graphs of f(x), g(x), and the vertical line x = 3 as shown in the figure.

a) Find the area of R.

b) Find the area of S.

c) Region R is the base of a solid. For this solid, each cross section perpendicular to the x-axis is a square. Find the volume of the solid.

d) Find the volume of the solid generated when R is revolved about the horizontal line y = -1.

e) Find the perimeter of the region S.