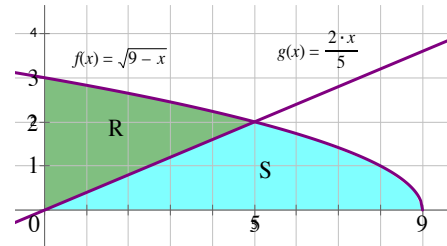


CALCULUS AB WS #2 CH.7 Name _____ Per. _____

Let $f(x) = \sqrt{9-x}$ and $g(x) = \frac{2x}{5}$

- 1) Find Area of Region R 2) Find Area of Region S



- 3) Find volume of solid formed by revolving Region R about:

- a) x -axis b) y -axis c) $y = 20$

- d) $x = -7$ e) $y = -6$ f) $x = 15$

- 4) Find the volume of the solid whose base is the region R and whose cross sections cut by planes perpendicular to the x -axis are:

- a) squares b) rectangle (height = $x + 4$) c) equilateral triangles

- 5) Find the volume of the solid whose base is the region S and whose cross sections cut by planes perpendicular to the y -axis are:

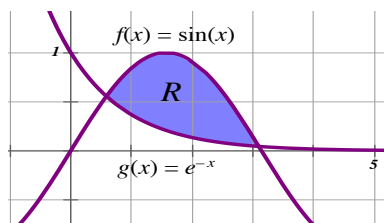
- a) semicircles b) rectangle (height = $12 \cdot \text{base}$)

CALCULUS AB CH.7 WS #3

Name _____

1) Given the enclosed region R between $f(x) = \sin x$ and $g(x) = e^{-x}$, find each of the following:

a) Volume rotated about $y = 10$



b) Volume rotated about $x = -4$

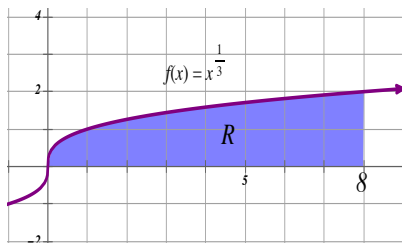
c) Volume of the solid whose base is the region R whose vertical cross sections are equilateral triangles.

d) Volume rotated about $y = -20$

2) Given the enclosed region R between $f(x) = \sqrt[3]{x}$ and the x -axis, find each of the following:

a) Area of enclosed region (vertical cross sections)

b) Area of enclosed region (horizontal cross sections)



c) Volume of the solid whose base is the region R whose vertical cross sections are squares

d) Volume of the solid whose base is the region R whose horizontal cross sections are semicircles.

e) The vertical line $x = k$ divides R into two regions with equal area. Find the value of k .