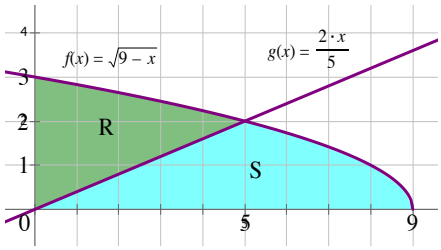
CH.7 Review WS #2 Name_____ Per._____

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

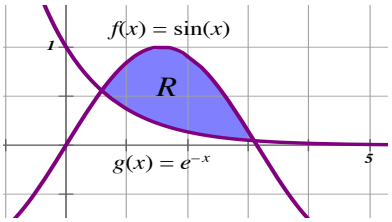
5) Find the volume of the solid whose base is the region S and whose cross sections cut by planes perpendicular to the y-axis are:

a) semicircles *b*) rectangle (height $= 12 \cdot$ base)

CH.7 Review 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 $x=-4$

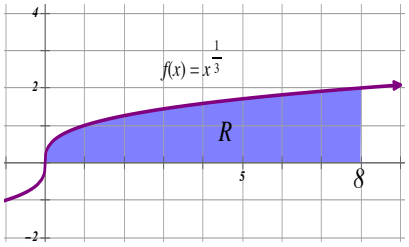
c) Volume of the solid whose base is the region R whose vertical cross sections are equilateral triangles.

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.