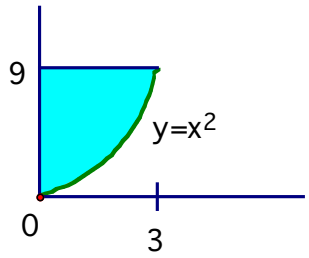
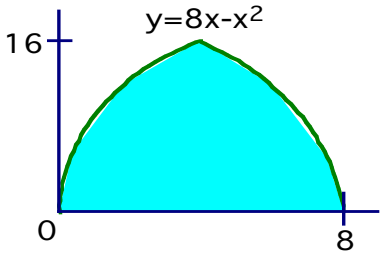
WS CH.7 Volumes rotated about other lines

Name:_____





Find the following volumes for the shaded regions above.

Set up only

1*a*) *volume about x - axis*

b) *volume about y - axis*

c) $vol.\ about\ line\ x = 4$

d) $vol.\ about\ line\ y = -5$

e) $vol.\ about\ line\ x = -3$

f) $vol.\ about\ line\ y = 9$

Set up and calculate

2*a*) *volume about x - axis*

b) *volume about y - axis*

c) $vol.\ about\ line\ x = 10$

d) $vol.\ about\ line\ y = -1$

e) $vol.\ about\ line\ x = -5$

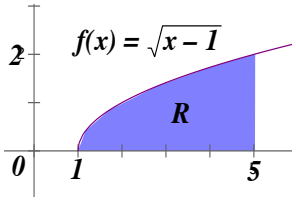
f) $vol.\ about\ line\ y = 20$

3) **Set up and calculate** to solve the following volumes for the shaded region between $f(x)=\sqrt{x-1}$ and the x-axis over the interval $[1,5]$.

a) *vol. about line* $y=-7$

b) *vol. about line* $y=15$

c) *vol. about line* $x=9$



d) *vol. about line* $x=-8$

4) **Set up only** the following volumes for the enclosed region between $f(x)=\frac{3}{5}x+1$ and $g(x)=3\ln x$.

a) *vol. about line* $x=12$

b) *vol. about line* $y=8$

Use what you have learned to set up the next two.

c) *vol. about line* $x=1$

d) *vol. about line* $y=1$