## Math 1001 Section 1 (Margo) Assignment \#6 Due Oct 30

1. Find the area between the curves given by their equations:
a) $y=2 \sqrt{x}$ and $2 x-3 y=0$;
b) $y=2 x^{2}+1$ and $x+y=2$;
c) $x=y^{2}-4$ and $x+y=2$;
d) $y=x^{2}+2 x$ and $y=4-x^{2}$;
e) $x-y^{2}=0$ and $x+y^{2}=6$;
f) $y=\frac{4}{x^{2}}, y=4 x$, and $y=x / 2$;
2. Calculate in two way the area bounded by the curves: $y=\sqrt{x}, y=0$, and $x+y=6$. Make sure you have the same numerical answer.
3. Find the volume of the solid obtained by revolution about the given axis of the region enclosed by the given curves. Use Disk or Washer methods.
a) $x+y=5, x y=4$; x-axis.
b) $y=x^{1 / 2}, y=2, x=0 ;$ y-axis.
c) $y=e^{2 x}, y=4, x=0$; x-axis.
d) $y=x^{2}+1, y=9-x^{2}$; x-axis.
e) $y=(x-2)^{2}, y=4$; axis: $y=4$.
f) $y=x^{1 / 2}, y=0, x=4$; axis: $y=3$.
g) $x=y^{2}, x=2 y$; axis $y=2$.
h) $y=2 x^{2}, y=0, x=2$; y-axis.
i) $y=x / 2, x+y=6, y=0$; axis $x=6$.
