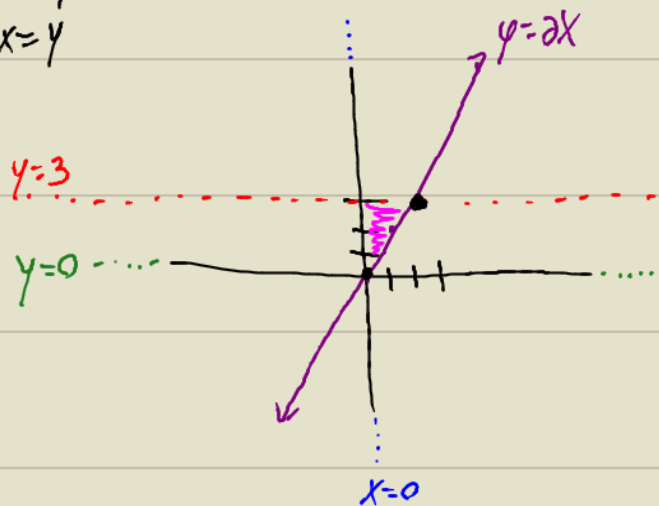


12. $y=3$ $x=\frac{1}{2}y$
 $\int_{y=0}^3 \int_{x=0}^{\frac{1}{2}y} f(x,y) dx dy$
R

POI of $y=3$ AND $y=2x$
 $3=2x$
 $\frac{3}{2}=x$

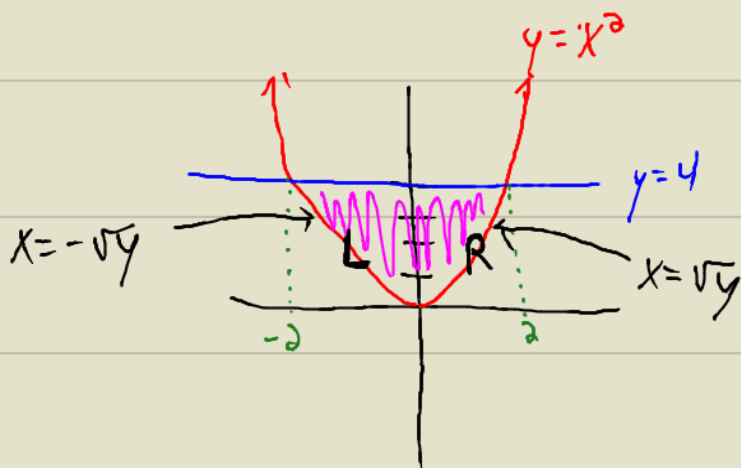
$x=\frac{3}{2}$ $y=3$
 $\int_{x=0}^{\frac{3}{2}} \int_{y=2x}^3 f(x,y) dy dx$

$x=\frac{1}{2}y$
 $2x=y$



13. $x=2$ $y=4$
 $\int_{x=-2}^2 \int_{y=x^2}^4 f(x,y) dy dx$
 $x=-2$ $y=x^2$

$y=4$ $x=\sqrt{y}$
 $\int_{y=0}^4 \int_{x=-\sqrt{y}}^{\sqrt{y}} f(x,y) dx dy$
 $x=-\sqrt{y}$



$y=x^2$
 $\pm\sqrt{y}=x$