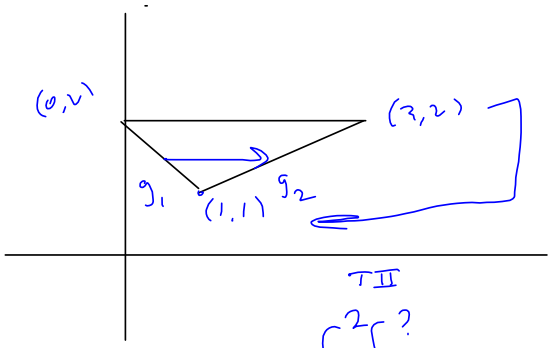
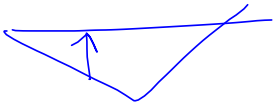


$$\iint_D y^3\,dA$$

TI

$$\int_1^2 \int_{?}^{?}$$



$$\int_0^1 \int_{y=g_1}^{y=2} + \int_1^3 \int_{y=g_2}^{y=2}$$

g_1

$y = m(x - x_1) + y_1$

$= \frac{2-1}{0-1}(x-0) + 2$

$= -1x + 2 = g_1$

$g_2 = \frac{2-1}{3-1}(x-1) + 1$

$= \frac{1}{2}x + \frac{1}{2} = g_2$

$(0,2), (1,1)$

$m = \frac{1-2}{1-0} = \frac{-1}{1} = -1$

$y -$

$\frac{y_2 - y_1}{x_2 - x_1} = m$

$y_2 - y_1 = m(x_2 - x_1)$

$y_2 = m(x_2 - x_1) + y_1$

$y = m(x - x_1) + y_1$

LEARN!

Find the volume

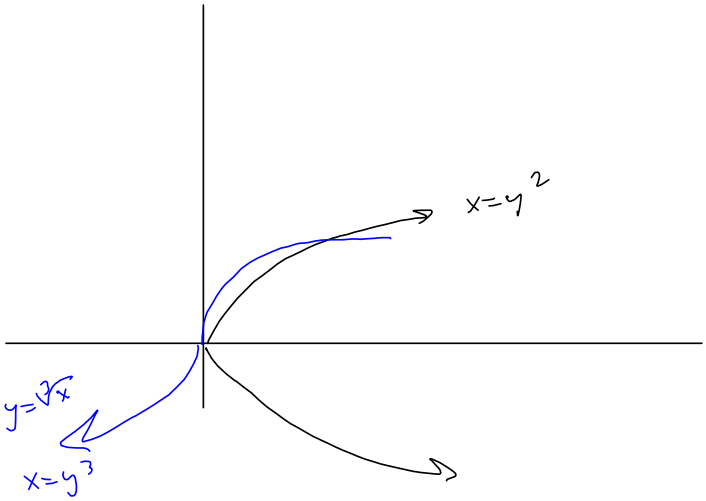
20. Under the surface $z = 2x + y^2$ and above the region bounded by $x = y^2$ and $x = y^3$

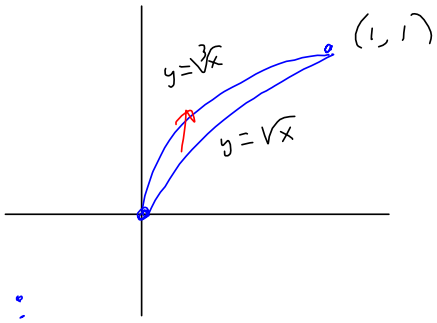
$x = y^2$

$y = \pm\sqrt{x}$

$x = y^3$

$y = \sqrt[3]{x}$



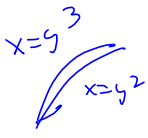


Present company accepted

Present company excepted

TI:

$$\int_0^1 \int_{y=\sqrt{x}}^{y=\sqrt[3]{x}} (2x+y^2)\, dy\, dx$$



TII

$$\int_0^1 \int_{x=y^3}^{x=y^2} (2x+y^2)\, dx\, dy$$

Type I

$$\int_0^1 \int_{\sqrt{x}}^{\sqrt[3]{x}} \left(2 \cdot x + y^2\right)\, dy\, dx \qquad \frac{19}{210}$$

Type II

$$\int_0^1 \int_{y^3}^{y^2} \left(2 \cdot x + y^2\right)\, dx\, dy \qquad \frac{19}{210}$$