FORMA 1

$y = x-1$

$y = \pm\sqrt{3-x}$

PAUTA REMEDIAL

$$A(R) = \int_{-1}^{2} \left(x-1+\sqrt{3-x}\right)dx + \int_{2}^{3} \left(\sqrt{3-x}+\sqrt{3-x}\right)dx$$

$$= \left(\frac{x^2}{2} - x - \frac{2}{3}(3-x)^{3/2}\right)\Bigg|_{-1}^{2} - \frac{4}{3}(3-x)^{3/2}\Bigg|_{2}^{3}$$

$$= \left(\cancel{2} - \cancel{2} - \frac{2}{3} - \frac{1}{2} - 1 + \frac{16}{3}\right) + \frac{4}{3}(1)$$

$36 - 9$

$$= \left(\frac{14}{3} - \frac{3}{2} + \frac{4}{3}\right) = \frac{18}{3} - \frac{3}{2} = \frac{27}{6}\ u^2$$

FORMA 2

$$A(R) = \int_{-2}^{1} \left(3-y^2-y-1\right)dy = \int_{-2}^{1}\left(2-y-y^2\right)dy$$

$$= \left(2y - \frac{y^2}{2} - \frac{y^3}{3}\right)\Bigg|_{-2}^{1}$$

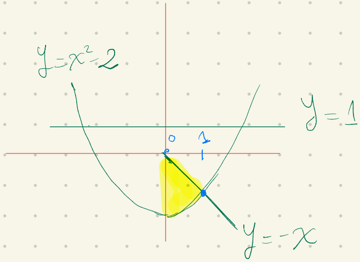
$$= \left(2 - \frac{1}{2} - \frac{1}{3}\right) - \left(-4 - 2 + \frac{8}{3}\right)$$

$$= 8 - \frac{9}{3} - \frac{1}{2} = 5 - \frac{1}{2} = \frac{9}{2}\ u^2$$

$y = x^2 - 2$

$y = -x$

$x = 0$



$-x = x^2 - 2$

$0 = x^2 + x - 2$

$0 = (x-1)(x+2)$

$$V(S) = \pi \int_0^1 \left[(x^2-2-1)^2 - (-x-1)^2 \right] dx$$

$$= \pi \int_0^1 \left[(x^2-3)^2 - (x+1)^2 \right] dx$$

$$= \pi \int_0^1 \left(x^4 - 6x^2 + 9 - x^2 - 2x - 1 \right) dx$$

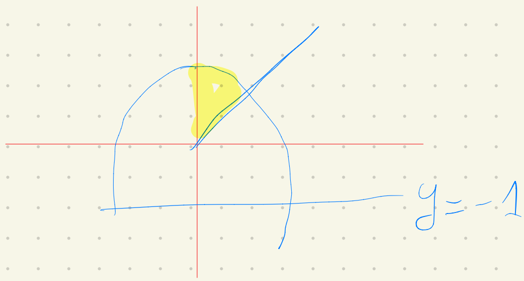
$$= \pi \int_0^1 \left(x^4 - 7x^2 - 2x + 8 \right) dx$$

$$= \pi \left(\frac{x^5}{5} - \frac{7}{3}x^3 - x^2 + 8x \right) \Big|_0^1 = \pi \left(\frac{1}{5} - \frac{7}{3} - 1 + 8 \right) = \frac{73}{15}\pi$$

$y = -x^2 + 2$

$y = x$

$x = 0$



$x^2 + x - 2 = 0$

$(x+2)(x-1) = 0$

$$V = \pi \int_0^1 \left[(-x^2+2+1)^2 - (x+1)^2 \right] dx$$

$$V = \pi \int_0^1 \left[(-x^2+3)^2 - (x+1)^2 \right] dx = \frac{73}{15}\pi$$