

②  $y = x^3$   
 $x + y = 2$

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Ponto de intersecção =  $P(1,1)$

Variações de  $x$ :  $0 \leq x \leq 2$ , variações de  $y$ :  $x^3 \leq y \leq -x+2$

~~$x^3 - x + 2$~~

~~$x^3 + x - 2 = 0$~~

~~$A = \int_0^2 \left[ \int_{x^3}^{-x+2} dy \right] dx$~~   $A = \int_0^2 \left[ \int_{x^3}^{-x+2} dy \right] dx$

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

$A = \int_0^2 -x dx + \int_0^2 2 dx - \int_0^2 x^3 dx$

$A = \int_0^2 -\frac{x^2}{2} + \int_0^2 2x - \int_0^2 \frac{x^4}{4}$

$A = \left( -\frac{(2)^2}{2} - \frac{0^2}{2} \right) + \left( 2(2) - 2(0) \right) - \left( \frac{(2)^4}{4} - \frac{0^4}{4} \right)$

$A = -2 + 2 + 4$

$A = 4$