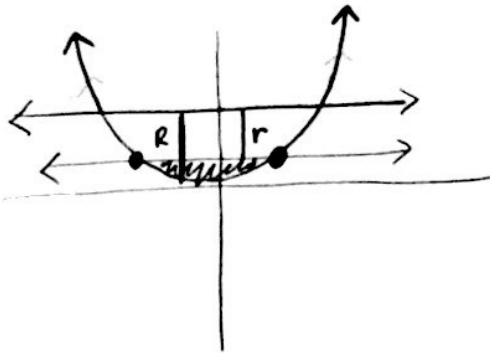


⑤ $y = x^4$, $y = 1$, about $y = 2$



$$x^4 = 1$$

$$x = \pm 1$$

$$(2 - x^4)(2 - x^4)$$

$$4 - 4x^4 + x^8$$

$$V = \pi \int_{-1}^1 (2 - x^4)^2 - (2 - 1)^2 dx$$

$$V = \pi \int_{-1}^1 (4 - 4x^4 + x^8 - 1) dx$$

$$= \pi \left(4x - \frac{4x^5}{5} + \frac{x^9}{9} - x \Big|_{-1}^1 \right)$$

$$\pi \left(4 - \frac{4}{5} + \frac{1}{9} - 1 \right) -$$

$$\left(-4 + \frac{4}{5} - \frac{1}{9} \right)$$

$$= \pi \left(\frac{104}{45} - \left(-\frac{149}{45} \right) \right)$$

$$= \frac{253\pi}{45}$$