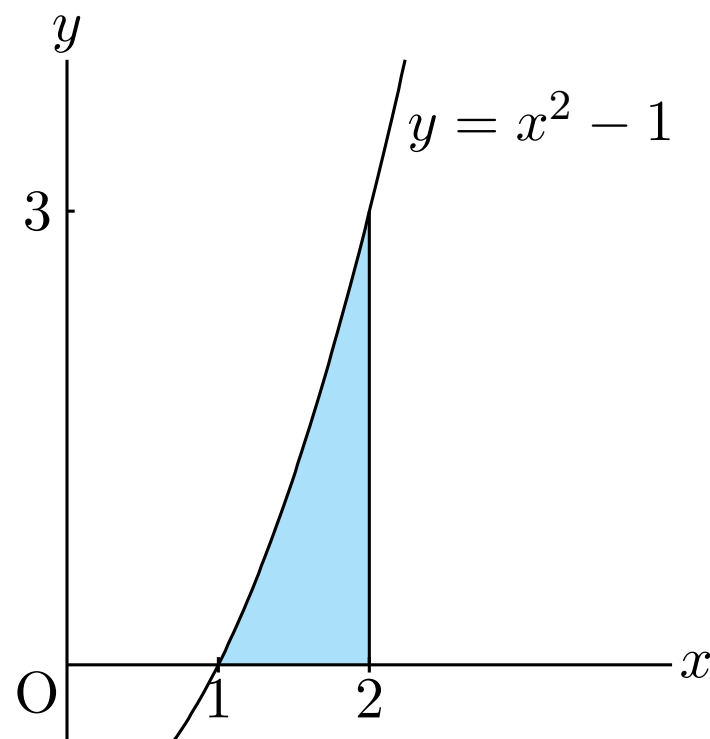


積分領域 D は図の通り.

$$\begin{aligned} & \iint_D (x^2 - 2y) \, dx dy \\ &= \int_1^2 \left\{ \int_0^{x^2-1} (x^2 - 2y) \, dy \right\} dx \\ &= \int_1^2 \left[x^2 y - y^2 \right]_0^{x^2-1} dx \end{aligned}$$



$$= \int_1^2 \{x^2(x^2 - 1) - (x^2 - 1)^2\} dx$$

$$= \int_1^2 (x^2 - 1) dx$$

$$= \left[\frac{1}{3}x^3 - x \right]_1^2 = \frac{4}{3}$$