Limit of the norm of the partition

Fubini's Theorem: Let $f(x, y)$ be continuous on a region R.

1.

2.

Examples

$-1 \le x \le 2, \ x-1 \le y \le x^2$

$0 \le y \le 1, \ 0 \le x \le \sin^{-1} y$

Bounded by $y = x^2$ and $y = x + 2$

$$\int_{1}^{4} \int_{0}^{\sqrt{x}} \frac{3}{2} e^{\frac{y}{\sqrt{x}}} \, dy dx$$

Curved region $f(s,t) = e^{s} \ln t$ over the region in the first quadrant of the st-plane that lies above the curve $s = \ln t$ from $1 \le t \le 2$

$$\int_{0}^{\frac{\pi}{6}} \int_{\sin x}^{\frac{1}{2}} xy^{2} \, dy dx$$

$$\int_{0}^{2} \int_{0}^{4-x^{2}} \frac{xe^{2y}}{4-y} \, dy dx$$