

903

$$V = \iint_D f(x, y) dx dy$$

903.a.

$$D = \{(x, y) : y \leq x \leq 2y, 0 \leq x \leq 2\}$$

$$V = \int_{x=0}^2 \int_{y=x/2}^x f(x, y) dy dx$$

903.b.

$D$  begränsas av  $y = x^2$  och  $y = x^4$ .

$$V = \int_{x=1}^0 \int_{y=x^4}^{x^2} f(x,y) dy dx + \int_{x=0}^1 \int_{y=x^4}^{x^2} f(x,y) dy dx$$

$$V = \int_{x=1}^1 \int_{y=x^4}^{x^2} f(x,y) dy dx$$

903.c.

$D$  begränsas av en triangel med hörnen i punkterna  $(0, 0)$ ,  $(1, 1)$  och  $(1, 2)$ .

$$V = \int_{x=0}^1 \int_{y=x}^{2x} f(x, y) dy dx$$

903.d.

$$D = \{(x, y) : x^2 + y^2 \leq 5, 2x \leq y\}$$

$$V = \int_{y=-2}^2 \int_{x=-\sqrt{5-y^2}}^{y/2} f(x, y) dx dy + \int_{y=2}^{\sqrt{5}} \int_{x=-\sqrt{5-y^2}}^{\sqrt{5-y^2}} f(x, y) dx dy$$