1. $f(x,y)$ D $\iint_D f(x,y)dxdy$.

[1] $f(x,y) = xy,$ $D = \{(x,y) \in \mathbb{R}^2 \mid 0 \le x \le 2, 0 \le y \le 3\}.$

[2] $f(x,y) = x^2 y,$ $D = \{(x,y) \in \mathbb{R}^2 \mid 0 \le x \le 2, 0 \le y \le 3\}.$

[3] $f(x,y) = x^2 + y^2,$ $D = \{(x,y) \in \mathbb{R}^2 \mid 0 \le x \le 2, 0 \le y \le 3\}.$

[4] $f(x,y) = x^3 + x^2 y + xy^2 + y^3,$ $D = \{(x,y) \in \mathbb{R}^2 \mid 0 \le x \le 2, 0 \le y \le 3\}.$

[5] $f(x,y) = \sqrt{xy},$ $D = \{(x,y) \in \mathbb{R}^2 \mid 0 \le x \le 1, 0 \le y \le 1\}.$

[6] $f(x,y) = x^{\frac{1}{2}} y + x^{\frac{3}{2}},$ $D = \{(x,y) \in \mathbb{R}^2 \mid 0 \le x \le 1, 0 \le y \le 1\}.$

[7] $f(x,y) = e^{x+y},$ $D = \{(x,y) \in \mathbb{R}^2 \mid 0 \le x \le 1, 0 \le y \le 1\}.$

[8] $f(x,y) = xe^{xy},$ $D = \{(x,y) \in \mathbb{R}^2 \mid 0 \le x \le 1, 0 \le y \le 1\}.$

[9] $f(x,y) = \cos(x+y),$ $D = \{(x,y) \in \mathbb{R}^2 \mid 0 \le x \le \pi/2, 0 \le y \le \pi/2\}.$

[10] $f(x,y) = x\cos(xy),$ $D = \{(x,y) \in \mathbb{R}^2 \mid 0 \le x \le 1, 0 \le y \le \pi\}.$

2. $f(x,y)$ D $\iint_D f(x,y)dxdy$.

[1] $f(x,y) = xy,$ $D = \{(x,y) \in \mathbb{R}^2 \mid 0 \le x \le 2, x \le y \le 2\}.$

[2] $f(x,y) = x^2 y,$ $D = \{(x,y) \in \mathbb{R}^2 \mid 0 \le y \le 1, y \le x \le 1\}.$

[3] $f(x,y) = x^2 + y^2,$ $D = \{(x,y) \in \mathbb{R}^2 \mid 0 \le x \le 1, 1 - x \le y \le 1\}.$

[4] $f(x,y) = \dfrac{y+1}{x},$ $D = \{(x,y) \in \mathbb{R}^2 \mid 1 \le x \le y+1, 0 \le y \le 1\}.$

[5] $f(x,y) = \dfrac{1}{xy},$ $D = \{(x,y) \in \mathbb{R}^2 \mid 1 \le x \le 2, 1 \le y \le x+1\}.$

[6] $f(x,y) = x^{\frac{1}{2}} y + x^{\frac{3}{2}},$ $D = \{(x,y) \in \mathbb{R}^2 \mid 0 \le x \le y^2, 0 \le y \le 1\}.$

[7] $f(x,y) = e^{x+y},$ $D = \{(x,y) \in \mathbb{R}^2 \mid 1 \le x \le 2, 0 \le y \le \log x\}.$

[8] $f(x,y) = xe^y,$ $D = \{(x,y) \in \mathbb{R}^2 \mid 0 \le x \le 1, 0 \le y \le x^2\}.$

[9] $f(x,y) = x\sin y,$ $D = \{(x,y) \in \mathbb{R}^2 \mid 0 \le x \le \pi, 0 \le y \le x\}.$

[10] $f(x,y) = y\cos \pi(y^2 - x),$ $D = \{(x,y) \in \mathbb{R}^2 \mid 0 \le x \le y^2, 0 \le y \le 1\}.$

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1.

[1]　9　　　　[2]　12　　　　[3]　26　　　　[4]　27　　　　[5]　$\dfrac{4}{9}$

[6]　$\dfrac{11}{15}$　　　[7]　$(e-1)^2$　　　[8]　$e-2$　　　[9]　2　　　[10]　$\dfrac{2}{\pi}$

2.

[1]　2　　　　[2]　$\dfrac{1}{10}$　　　[3]　$\dfrac{1}{2}$　　　　[4]　$\dfrac{1}{2}$　　　[5]　$\dfrac{1}{2}$

[6]　$\dfrac{1}{5}$　　　[7]　e　　　[8]　$\dfrac{e-2}{2}$　　　[9]　π　　　[10]　$\dfrac{1}{\pi^2}$