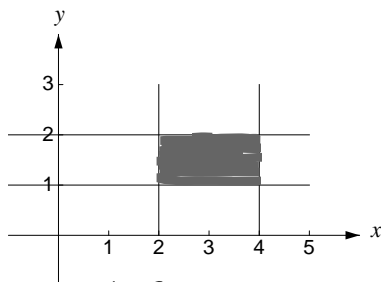


# Practicing Limits for Double Integrals

Name: Key

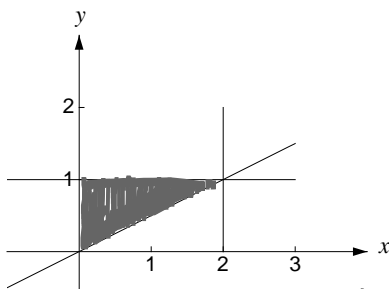
Shade the region that matches the integral. Rewrite the integral using the opposite order of integration.

1)  $\int_1^2 \int_2^4 f(x, y) dx dy$



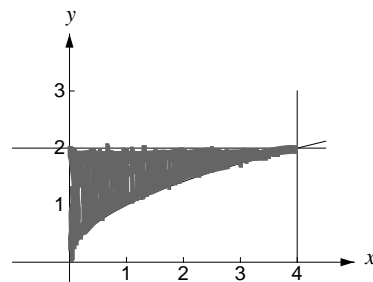
$\int_2^4 \int_1^2 f dy dx$

2)  $\int_0^2 \int_{x/2}^1 f(x, y) dy dx$



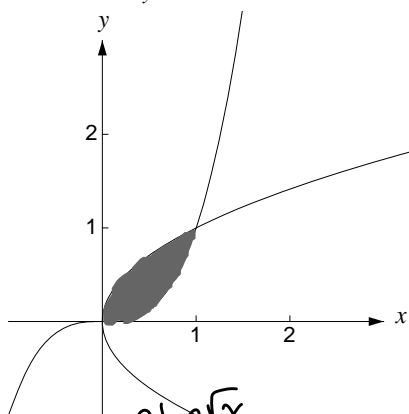
$\int_0^1 \int_0^{2y} f dx dy$

3)  $\int_0^4 \int_{\sqrt{x}}^2 f(x, y) dy dx$



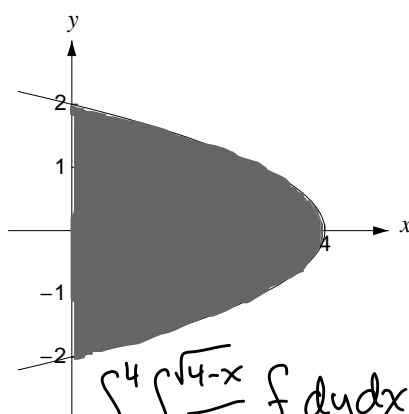
$\int_0^2 \int_0^{y^2} f dx dy$

4)  $\int_0^1 \int_{y^2}^{\sqrt[3]{y}} f(x, y) dx dy$



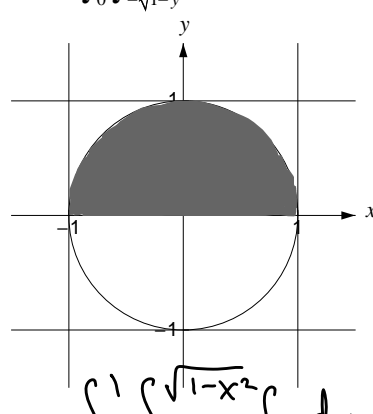
$\int_0^1 \int_{x^3}^{\sqrt{x}} f dy dx$

5)  $\int_{-2}^2 \int_0^{4-y^2} f(x, y) dx dy$



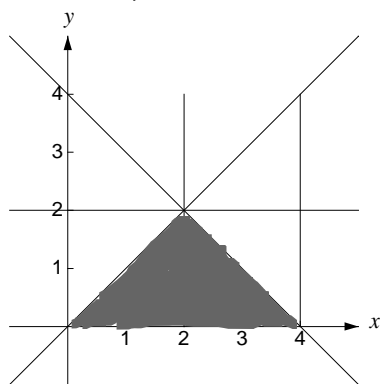
$\int_0^4 \int_{-\sqrt{4-x}}^{\sqrt{4-x}} f dy dx$

6)  $\int_0^1 \int_{-\sqrt{1-y^2}}^{\sqrt{1-y^2}} f(x, y) dx dy$



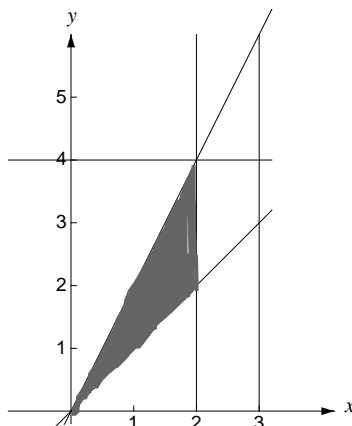
$\int_{-1}^1 \int_0^{\sqrt{1-x^2}} f dy dx$

7)  $\int_0^2 \int_y^{4-y} f(x, y) dx dy$



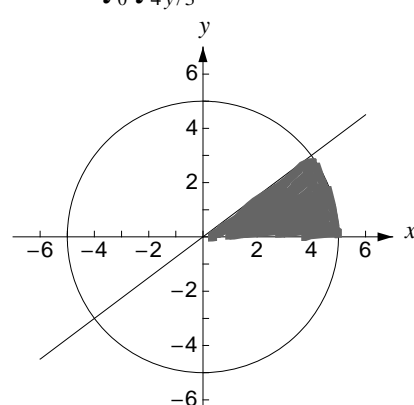
$\int_0^2 \int_0^x f dy dx + \int_2^4 \int_0^{4-x} f dy dx$

8)  $\int_0^2 \int_x^{2x} f(x, y) dy dx$



$\int_0^2 \int_{y/2}^y f dx dy + \int_2^4 \int_{y/2}^2 f dx dy$

9)  $\int_0^3 \int_{4y/3}^{\sqrt{25-y^2}} f(x, y) dx dy$



$\int_0^4 \int_0^{3x/4} f dy dx + \int_4^5 \int_0^{\sqrt{25-x^2}} f dy dx$