

(15.3 #13) Draw the region of integration, and evaluate the double integral:

$$\iint_D y \cos x \, dA, \quad D \text{ is bounded by } x = 0, x = -y^2, y = -1$$

(15.3 #17) Draw the region of integration, and evaluate the double integral:

$$\iint_D (3y - x) \, dA, \quad D \text{ is bounded by the circle with center the origin and radius 2}$$

(15.3 #19) Draw the region of integration, and find the volume of the solid under the plane

$$x + 4y - z = 0$$

and above the region bounded by $y = x$ and $y = x^2$

(15.4 #3) Draw the region $R = \{(x, y) | x \geq -2, x \leq y, y \leq 2\}$. Decide whether to use polar or rectangular coordinates and write $\iint_R f(x, y) \, dA$ as an iterated integral, where f is an arbitrary continuous function on R .

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(15.4 #4) Draw the region $R = \{(x, y) | x^2 + y^2 \geq 1, x^2 + y^2 \leq 9, x \geq 0, y \geq 0\}$. Decide whether to use polar or rectangular coordinates and write $\iint_R f(x, y) \, dA$ as an iterated integral, where f is an arbitrary continuous function on R .