Fall 2025 **Math 53, Sections 104/106**

Discussion #17

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1. $\iint_D x \cos y dA$ where D is bounded by $y = 0, y = x^2, x = 1$;
2. $\iint_D 2x - y dA$ where D is bounded by the circle with center at the origin and radius 2.
3. Find the volume of the solid under the surface $z = xy$ and above the triangle with vertices $(1, 1), (4, 1), (1, 2)$.
4. Find the volume enclosed by $z = x^2, y = x^2$ and the planes $z = 0$ and $y = 4$.
5. Find the volume of the solid by subtracting two volumes. The solid is enclosed by $y = 1 - x^2, y = x^2 - 1$, and the planes $x + y + z = 2, 2x + 2y - z + 10 = 0$.