Math 53 (Multivariable Calculus), Section 102 & 108
Week 9, Friday
Oct 21, 2022
For the other materials: seewoo5.github.io/teaching/2022Fall

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1. Find the volumn of the solid below the plane $2x+y+z=4$ and above the disk $x^2+y^2 \leq 1$.
2. Compute $\int_0^{1/2} \int_{\sqrt{3}y}^{\sqrt{1-y^2}} xy^2 dxdy$ using 1) rectangular coordinate and 2) polar coordinate.
3. A lamina occupies the part of the disk $x^2+y^2 \leq 1$ in the first quadrant. Find its center of mass if the density at any point is proportional to its distance from the x-axis.