Math 53 (Multivariable Calculus), Section 102 & 108
Week 11, Monday
Oct 31, 2022
For the other materials: seewoo5.github.io/teaching/2022Fall

1. Evaluate
$$\iint_R \frac{(x-y)^2}{x+y-2} dA$$
where R is given by the inequality $|x| + |y| \leq 1$. Use the transformation $u = x + y$ and $v = x - y$.

2. Find the volume of the region bounded by the surface $\sqrt{x} + \sqrt{y} + \sqrt{z} = 1$ and and the coordinate planes. Use the transformation $x = u^2, y = v^2, z = w^2$.