MATH 104: WORKSHEET 13

1. Concepts

(1) Integration
(2) Riemann Sum

2. Discussions

Problem 2.1. Find the values of $w \geqslant 0$ and $\kappa \geqslant 0$ that maximize the utility function

$$U(w, \kappa) = 6w^{\frac{2}{3}}\kappa^{\frac{1}{3}}$$

subject to the constraint $4w + 2\kappa = 12$.

Problem 2.2. Maximize $\sum_{i=1}^{n} x_i y_i$ subject to the constraint $\sum_{i=1}^{n} x_i^2 = 1$ and $\sum_{i=1}^{n} y_i^2 = 1$.

Problem 2.3. Follow the activity on Active Calculus: https://activecalculus.org/multi/S-11-1-Double-Integrals-Rectangles.html

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