

Econ 301 Discussion - 9/15/2023

Instructor: Fran Flanagan

TA: John Ryan

Content Review

- Preferences:
 - Rational preferences:
 - Completeness
 - Transitivity
 - Utility representation of preferences
 - Marginal Utility and Marginal Rate of Substitution

Practice Questions

1. Let $f(x, y) = 2x^2y + 3xy^3$. Find $\frac{\partial f(x,y)}{\partial x}$ and $\frac{\partial f(x,y)}{\partial y}$.

2. Consumer A has rational preferences and chooses a from budget set $B_1 = \{a, b, c, d\}$ and d from budget set $B_2 = \{c, d, e\}$. Provide a possible strict preference ranking of all a, b, c, d, e .

3. Consumer B's utility function is $u(a, b) = 2a + 3b$. What is Consumer B's preferences over the bundles $(a_1, b_1) = (2, 3)$ and $(a_2, b_2) = (4, 1)$?

4. Prove that $u(x, y) = x^a y^b$ on \mathbb{R}_+^2 is equivalent to $v(x, y) = a \log(x) + b \log(y)$.

5. Consumer B has utility function $u(a, b) = a^2 b$. What is Consumer B's marginal rate of substitution of a for b (MRS_{ab}) at $(a, b) = (2, 1)$?