

Recitation 4 Notes
14.01SC Principles of Microeconomics

I. Demand Functions

a. Perfect Complements $u(x,y) = \min(x, y/4)$

$$x^* = 1/4 y^*$$

$$P_x x^* + P_y y^* = I$$

Substitute and solve to get:

$$y^*(P_x P_y I) = I / (1/4 P_x + P_y)$$

$$x^*(P_x P_y I) = 1/4 I / (1/4 P_x + P_y)$$

b. $u(x,y) = x^*y$ (neither substitutes nor complements)

$$MRS = -MU_x / MU_y = -y/x$$

$$MRT = -P_x/P_y$$

$$Y^* = (P_x/P_y) (x^*)$$

$$X^*(P_x, P_y, I) = I/2P_x$$

$$Y^*(P_x, P_y, I) = I/2P_y$$

MIT OpenCourseWare
<http://ocw.mit.edu>

14.01SC Principles of Microeconomics
Fall 2011

For information about citing these materials or our Terms of Use, visit: <http://ocw.mit.edu/terms>.