Producer Theory, Consumer Theory, and Decision Theory

Problem Set 2

1. Solve for the Marshallian demands in (with $a > 0$):

$$\max_{(x_1,x_2)\in\mathbb{R}_+^2} \left\{ U(x_1, x_2) = \min\{x_1, ax_2\} : p_1 x_1 + p_2 x_2 \leq y \right\}.$$

2. J-R, 1.28, p. 62.

3. Given the indirect utility function $v(p_1, p_2, y) = \frac{y}{\min\{p_1,p_2\}}$ find the Marshallian demands, expenditure function and direct utility function.

4. Consider the indirect utility function given by

$$v(p_1, p_2, y) = \begin{cases} -\infty & \text{if } y < p_1 + 3p_2 \\ \left(\frac{y-p_1-3p_2}{2p_1}\right)\left(\frac{y-p_1-3p_2}{2p_2}\right) & \text{if } y \geq p_1 + 3p_2 \end{cases}.$$

Find the Marshallian demands, expenditure function and direct utility function. (Hint: think!)

5. M-W-G, 3.D.3, p. 97 (in part a. avoid the question regarding the wealth expansion path).