Homework 2

The homework is due Wednesday, Sept. 13 during class.

**Question 1** 2.D.3

**Question 2** 2.E.2

**Question 3** There are two commodities. Demand for commodity 1 is given by

\[ x_1(p_1, p_2, w) = \frac{w}{p_1 + 2p_1^{1/3}p_2^{2/3}} \]

1. Graph the Wealth expansion path for \( p_1 = p_2 = 1 \) and \( p_1 = 1, p_2 = 8 \).
2. Graph 3 different demand curves for good.
3. Graph a typical offer curve.

**Question 4** There are two commodities. The utility function is given by

\[ u(x_1, x_2) = \min\{x_1 + 4x_2, x_2 + 40\} \]

1. Find prices \( p_1, p_2 \) such that commodity 1 is normal for low \( w \), but inferior for larger \( w \).
2. Graph the Wealth expansion path for this choice of prices.
3. Find prices \( p_1, p_2 \) and \( w \) such that commodity 1 is a Giffen good.
4. Graph the offer curve for this choice of \( p_2, w \) (as you change \( p_1 \).)