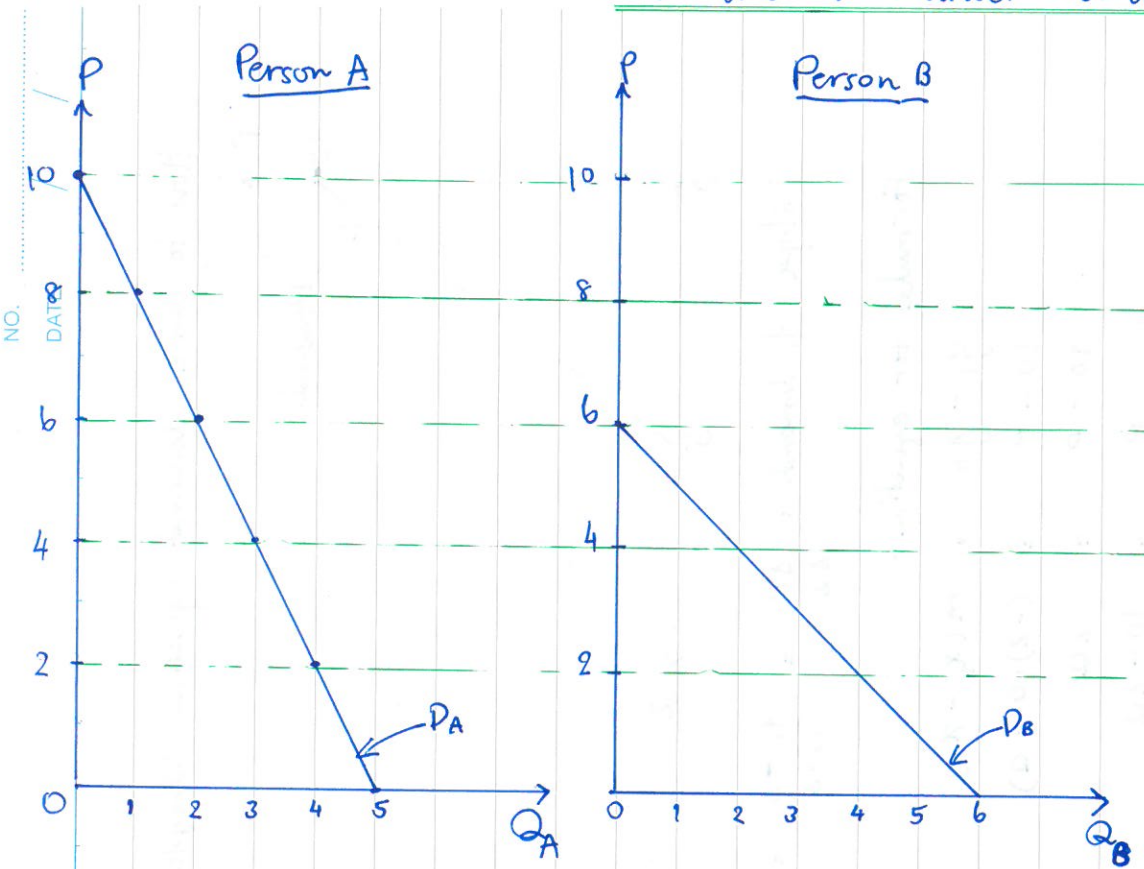
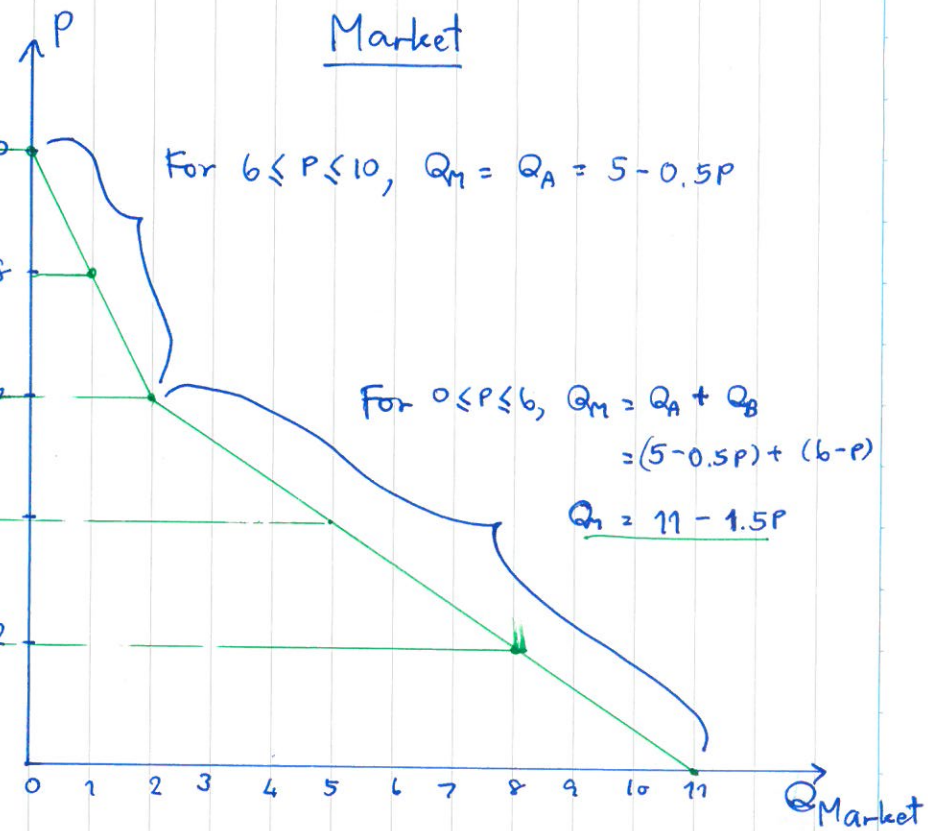
Individual & Market Demands





For $6 \leq P \leq 10$, $Q_M = Q_A = 5 - 0.5P$

For $0 \leq P \leq 6$, $Q_M = Q_A + Q_B$

$= (5 - 0.5P) + (6 - P)$

$Q_M = 11 - 1.5P$

D_A: $P = 10 - 2Q_A$

(see derivation of equation below).

$2Q_A = 10 - P$

$Q_A = 5 - 0.5P$

At $P = 10$, $Q_A = 0$

At $P = 8$, $Q_A = 1$

At $P = 6$, $Q_A = 2$

At $P = 4$, $Q_A = 3$; At $P = 2$, $Q_A = 4$

At $P = 0$, $Q_A = 5$

D_B: $P = 6 - Q_B$

$Q_B = 6 - P$

At $P = 10$, $Q_B = 0$

At $P = 8$, $Q_B = 0$

At $P = 6$, $Q_B = 0$

At $P = 4$, $Q_B = 2$

At $P = 2$, $Q_B = 4$

At $P = 0$, $Q_B = 6$

* Market demand is the horizontal sum of individual quantity demanded at each given price *.

At $P = 10$, $Q_M = 0$

At $P = 8$, $Q_M = Q_A = 1$

At $P = 6$, $Q_M = Q_A = 2$

At $P = 4$, $Q_M = Q_A + Q_B = 5$

At $P = 2$, $Q_M = Q_A + Q_B = 8$

At $P = 0$, $Q_M = Q_A + Q_B = 11$

NO. .....

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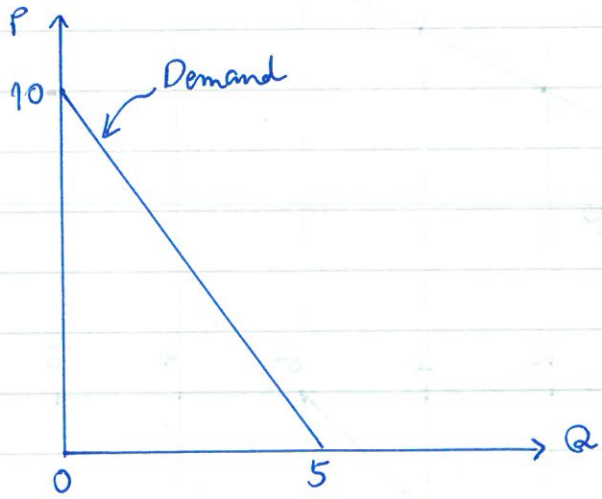
How to derive demand equation (supplemental).



slope of demand = $\frac{\Delta P}{\Delta Q} = \frac{10-0}{0-5} = -2$

Formula for equation:

$y_1 - y_0 = m(x_1 - x_0)$

$10 - P = (-2)(0 - Q)$

$10 - P = 2Q$

$\therefore \quad P = 10 - 2Q$: Inverse demand function.