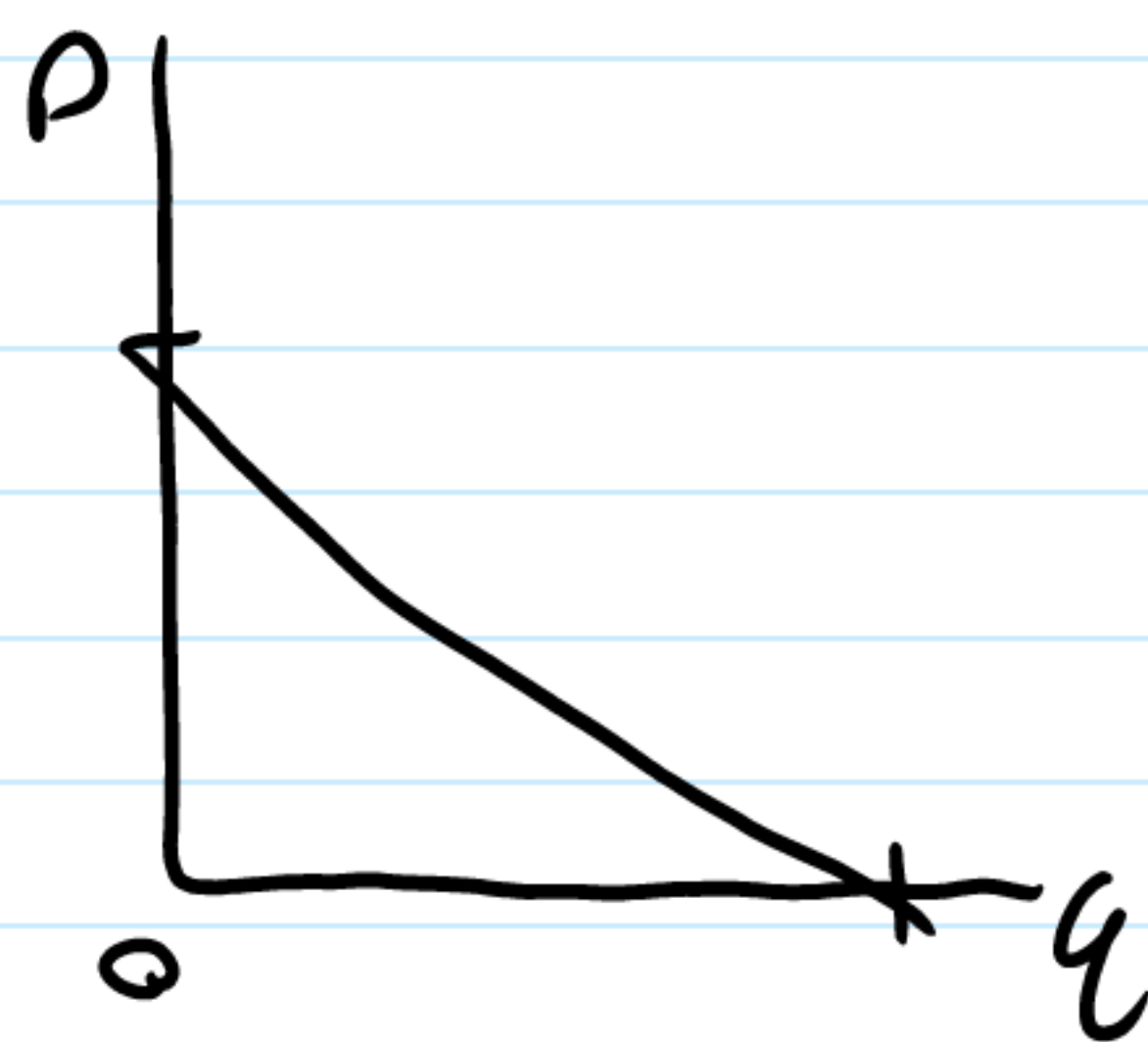


2.7 Demand and Revenue

Friday, January 22, 2021

3:55 PM

p	q	R
10	100	1000
9	120	1080
8	140	1120
7	160	1120
6	180	1080
5	200	1000
4	220	880



$$\frac{\Delta q}{\Delta p} = -20$$

$$\begin{aligned} q &= 100 - 20(p - 10) \\ &= 100 - 20p + 200 \\ &= 300 - 20p \end{aligned} \quad \rightarrow \quad p = 15 - .05q$$

$$R(q) = p \cdot q$$

$$MR = \frac{dR}{dq} = \frac{dp}{dq} \cdot q + 1 \cdot p \quad \Rightarrow \quad \frac{dp}{dq} < 0$$

$$\hookrightarrow MR = p + \frac{dp}{dq} \cdot \frac{q}{p} p = p \left(1 + \frac{1}{3} \right) = p \left(\frac{4}{3} \right)$$