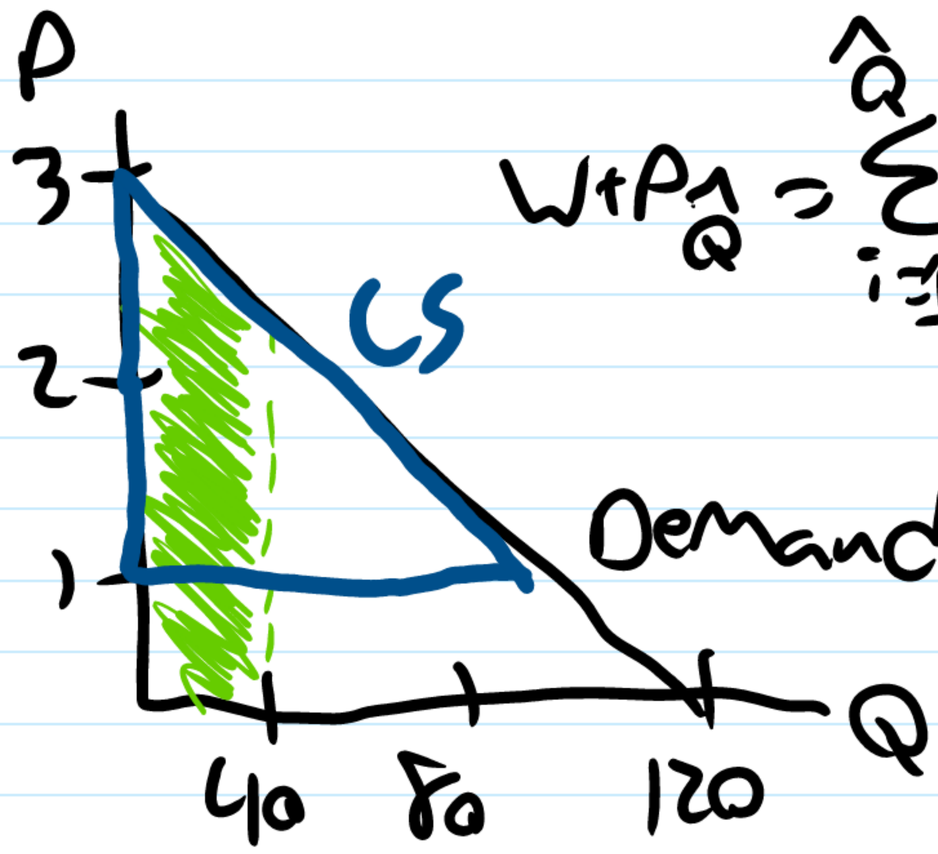
3.2 Demand, WtP, and Consumer Surplus

Tuesday, August 25, 2020 8:16 PM



$$WtP_{\hat{Q}} = \sum_{i=1}^{\hat{Q}} P(1) + P(2) + \dots P(\hat{Q})$$

$$WtP = \int_0^Q P(x)\,dx = (2-1)(40-0) + (3-2)\left(\tfrac{1}{2}(40-0)\right) = 80 + 20 = 100$$

$$CS = \tfrac{1}{2}(3-1)(80) = 80$$

$CS \equiv WtP - Payments$

ΔCS

$CS = V(Q) - PQ$

↳ WtP ↳ Payment

$\frac{dCS}{dQ} = \frac{dV}{dQ} - P = 0$

$P = dV/dQ$ = Inverse demand function