Example 3.K ***Price control and Welfare***

Consider the market for apartment rentals in Chicago. The price of rent is determined by the following system of equations.

Demand: $p = -2q_d + 160$

Supply: $p = q_s + 10$

- What is the equilibrium price and quantity in the market for apartment rentals?

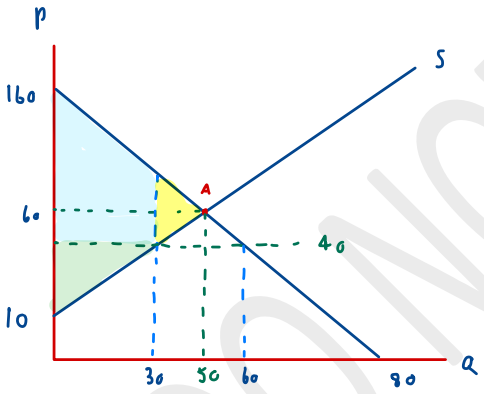
$-2q + 160 = q + 10$

$-3q = -150$

$q^* = 50$

$p^* = 60$

- Suppose the government tries to control the rent prices through a price ceiling of $40. Discuss the implication of this policy. Is there any deadweight loss?



Price ceiling → cap the highest price

Equation quantity in the mkt with ceiling $P = 40$

$Q = \min\{Q^s, Q^d\}$ when $P = 40$

$P = 40$

- Demand → $40 = -2Q^D + 160$

$-120 = -2Q^D$, $Q^D = 60$

- Supply → $40 = Q^S + 10$

$Q^S = 30$