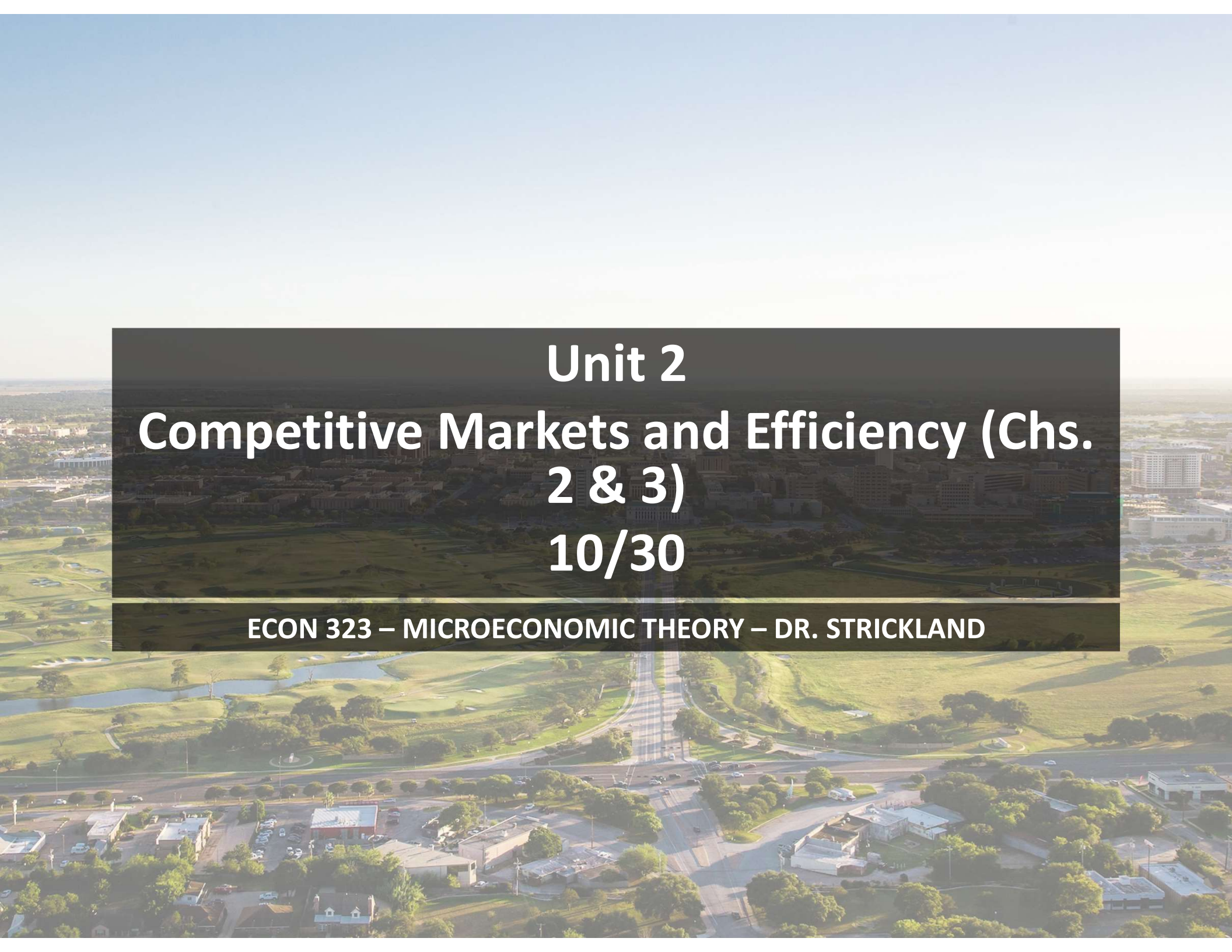


Unit 2
Competitive Markets and Efficiency (Chs. 2 & 3)
10/30

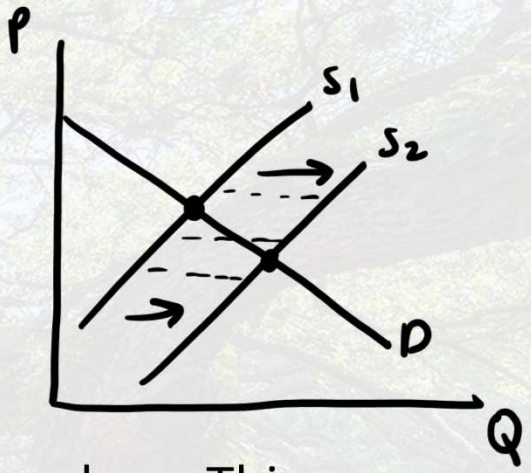
ECON 323 – MICROECONOMIC THEORY – DR. STRICKLAND

Let's practice!

Suppose the demand and supply for wands is:

- $Q^D = 2{,}800 - 25P$
- $Q^S = 15P - 400$

In equilibrium, 800 wands are sold for 80 sickles each.



Suppose a new spell is discovered to make wands easier to produce. This increases quantity supplied by 200 at any given price.

a. What is the new supply curve?

$$Q^S_{new} = Q^S + 200$$
$$= (15P - 400) + 200$$
$$= \boxed{15P - 200}$$

Let's practice!

b. What is the new market equilibrium?

$Q_D = 2800 - 25P$ $Q_S = 15P - 400$ FROM (a) $Q^S_{new} = 15P - 200$

$Q_D = Q^S_{new}$

$2800 - 25P = 15P - 200$

$40P = 3000$

$\boxed{P^* = 75}$

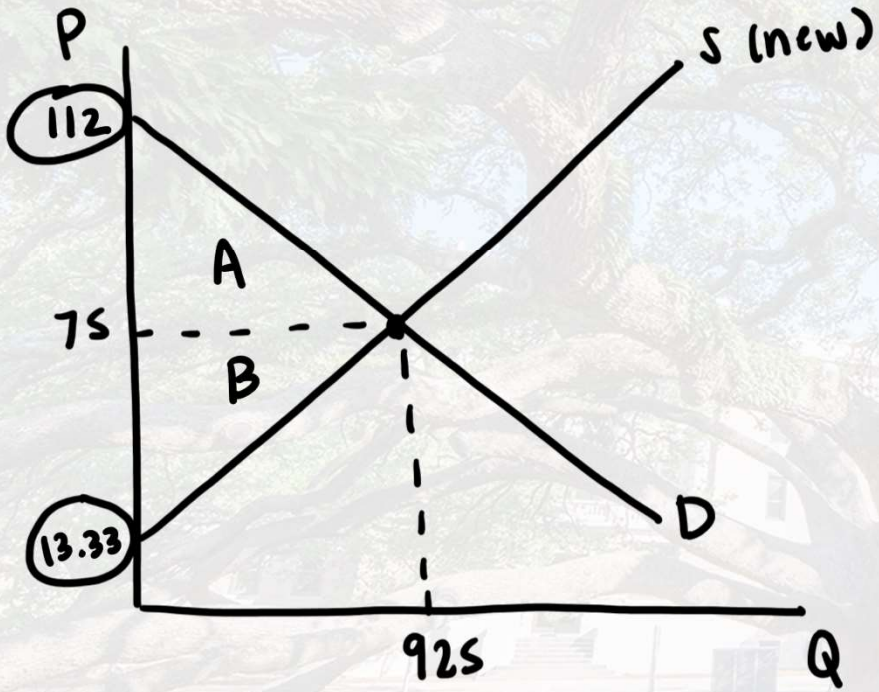
$Q^* = 15(75) - 200 = \boxed{925}$

Let's practice!

$Q_D = 2800 -$

$Q_D = 2800 - 25P$ $\quad Q_S^{new} = 15P - 200$

c. Calculate consumer and producer surplus at the new equilibrium.



P^D_{CHOKE}: $0 = 2800 - 25P \Rightarrow P = 112$

P^S_{CHOKE}: $0 = 15P - 200 \Rightarrow P = 13.33$

$CS = WTP - P^* = \text{area } A$

$CS = \frac{1}{2}(P^D_{CHOKE} - P^*)(Q^*)$

$= \frac{1}{2}(112 - 75)(925)$

$= \boxed{17,112.5}$

$PS = P^* - WTS = \text{area } B$

$= \frac{1}{2}(P^* - P^S_{CHOKE})(Q^*)$

$= \frac{1}{2}(75 - 13.33)(925)$

$= \boxed{28,522.38}$

Let's practice!

Consider hours of park play in Pawnee, Indiana. The demand and supply for park play is given by:

$$Q^D = 2{,}500 - 20P$$
$$Q^S = 100P - 3500$$

a. Calculate the equilibrium price and quantity if Pawnee is a free (competitive) market for park play.

$Q_D = Q_S$

$2500 - 20P = 100P - 3500$

$\boxed{P^* = \$50}$

$Q^* = 2500 - 20(50) = \boxed{1500}$

Let's practice!

b. Suppose the Pawnee zoning board will not let Leslie Knope turn the Sullivan Street Pit into a park, effectively restricting the amount of park play to 500 hours. How much will Pawnee citizens have to pay for park play?

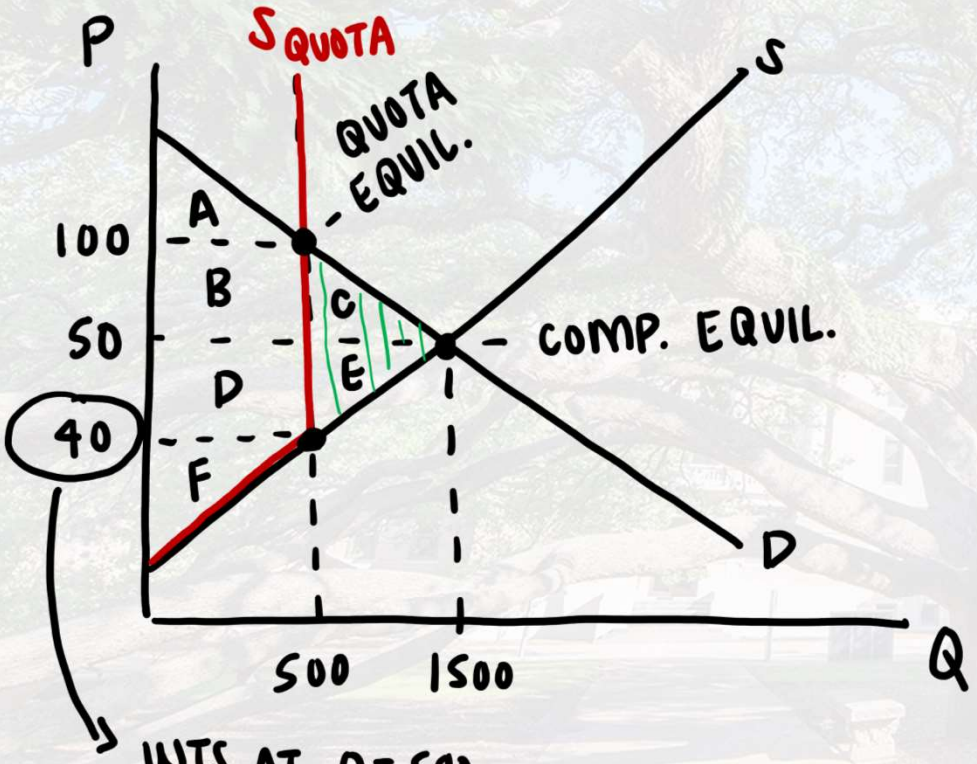
$$QUOTA = 500$$

$$Q_D = 2500 - 20P = 500$$

$$\boxed{P = 100}$$

Let's practice!

c. Calculate the transfer and deadweight loss resulting from this regulation.



WTS AT Q = 500

$500 = 100P - 3500 = Q_S$

$\Rightarrow P = 40$

COMP. EQUIL.

$CS = A + B + C$

$PS = D + E + F$

QUOTA EQUIL.

$CS = A$

$PS = B + D + F$

TRANSFER = B

$= (100 - 50)(500) = \boxed{\$25{,}000}$

DWL = C + E

$= \frac{1}{2}(100 - 40)(1500 - 500)$

$= \boxed{\$30{,}000}$

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Consider a perfectly competitive industry in which firms have different costs. Specifically, there are two types of firms: higher-cost firms and lower-cost firms. Which of the following is **TRUE** in long-run equilibrium?

A. Each firm will face a different market price

B. The lower-cost firm will have a positive economic profit (i.e., greater than 0)

C. The higher-cost firm will produce more

D. The long-run market price could be higher or lower than the short-run market price