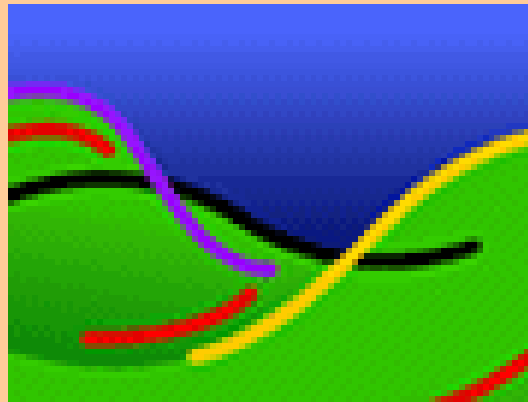


# Supply and Demand on the Housing Market





# Markets

*A market* is a group of buyers and sellers with the potential to trade.







# Markets

- Defining the Good or Service
  - Buyers and Sellers
- Geography of the Market



# Supply, Demand, and Market Definition

**The supply and demand model  
is designed to explain how prices  
are determined**





# Demand



- The Law of Demand
- The Demand Schedule and the Demand Curve
- Changes in Quantity Demanded
  - Changes in Demand





# Demand



An *individual's quantity demanded* of any good is the total amount that individual would choose to buy at a particular price.





# Demand



The *market quantity demanded* of any good is the total amount that all buyers in the market would decide to buy at a particular price.





# Law of Demand

The *law of demand* states that when the price of a good rises and everything else remains the same, the quantity of the good demanded will fall.









# Carbondale, IL

***Demand Schedule:*** a list showing quantities of a good that consumers would choose to purchase at different prices, with all other variables held constant.

| Price<br>(per new house) | Quantity Demanded<br>(houses per year) |
|--------------------------|--|
| \$80,000                 | 10                                     |
| 100,000                  | 8                                      |
| 120,000                  | 6                                      |
| 140,000                  | 4                                      |
| 160,000                  | 2                                      |







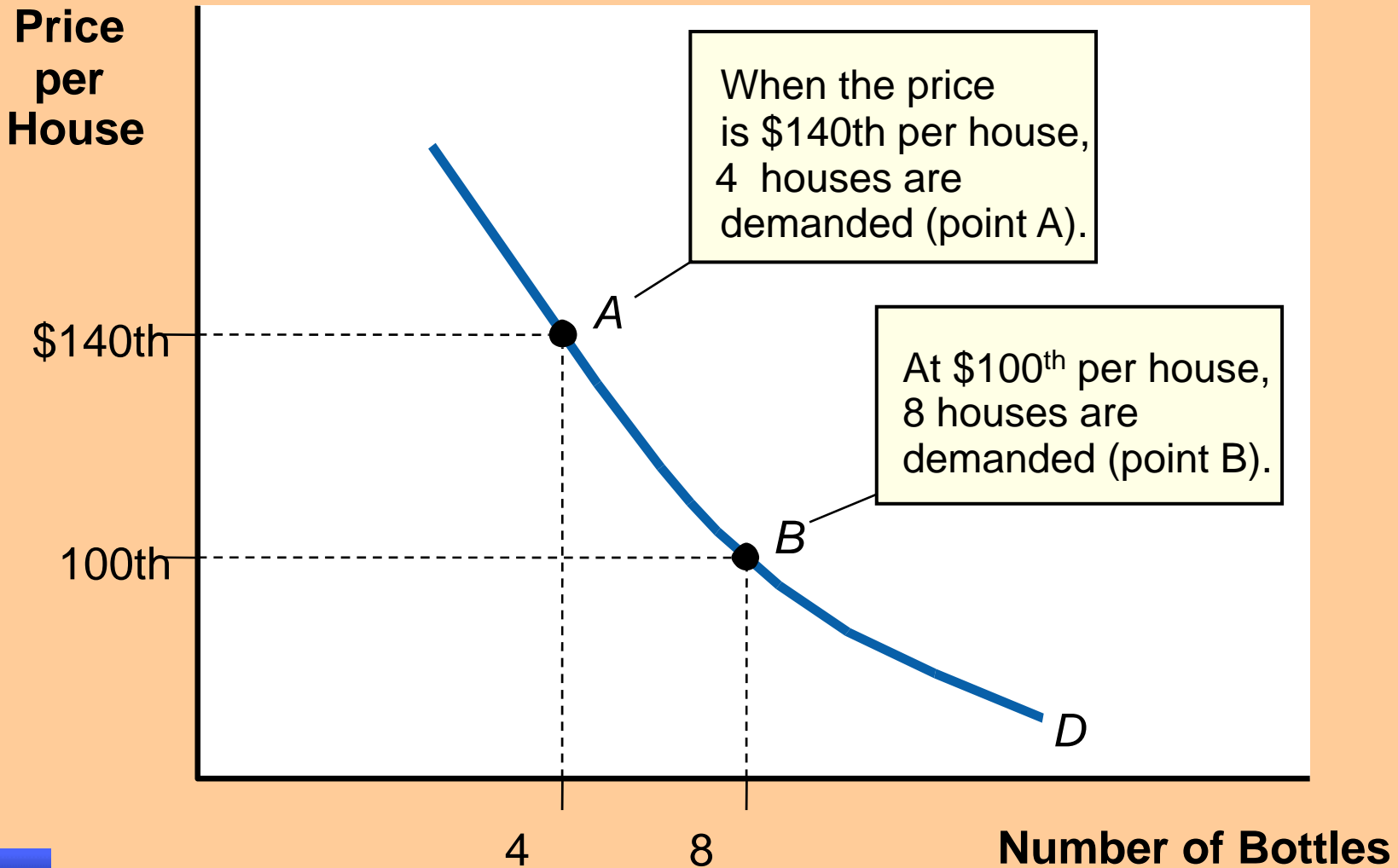
# The Demand Curve

***Demand Curve:*** shows the relationship between the price of a good and the quantity demanded, holding constant all other variables that affect demand.

*Each point on the curve shows the total quantity buyers would choose to buy at a specific price.*



# The Demand Curve





# Changes in Quantity Demanded

***Change in quantity demanded:*** change in a good's price that causes a move along the demand curve



- A rise in price causes a **leftward** movement along the demand curve - *a **decrease** in quantity demanded.*
- A fall in price causes a **rightward** movement along the demand curve - *an **increase** in quantity demanded.*





# Changes in Demand

***Change in demand:*** change in any determinant of demand - *except* for the good's price - that causes the demand curve to shift

- Buyers purchase more at any price: demand curve shifts rightward - ***increase in demand***
  - Buyers purchase less at any price: demand curve shifts leftward - ***decrease in demand***
- 
- 



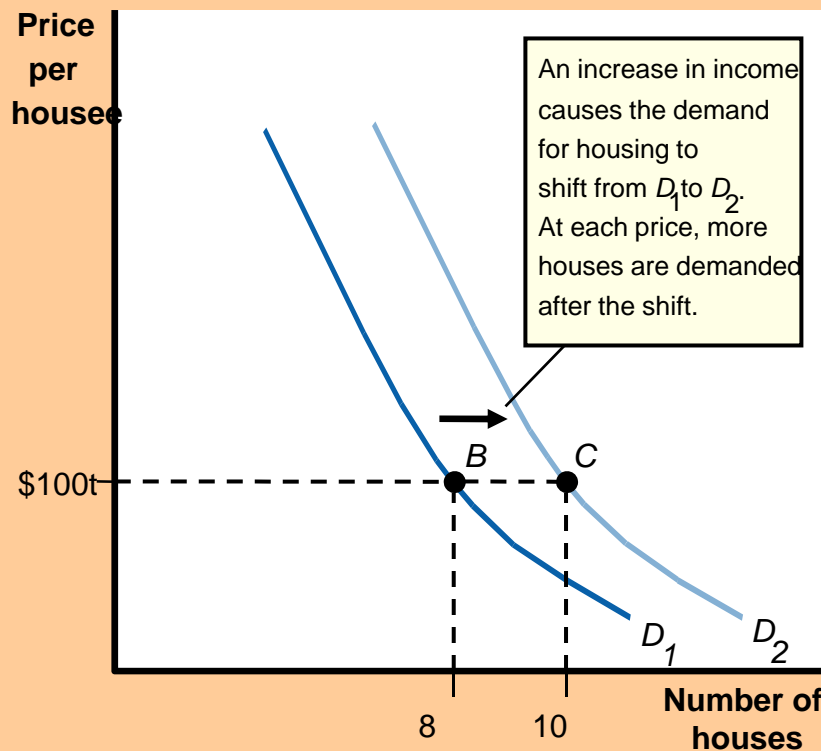
# Demand vs. Quantity Demanded

*Change in Quantity Demanded* =  
movement *along* the demand curve

*Change in Demand* = movement  
*of the entire* demand curve



# Changes in Demand





| Price<br>(per house) | Original<br>Quantity Demanded<br>(houses per year) | New Quantity Demanded<br>After Increases in Income<br>(houses per year) |
|----------------------|--|---|
| \$80,000             | 10   | 12  |
| 100,000              | 8  | 10  |
| 120,000              | 6  | 8   |
| 140,000              | 4  | 6   |
| 150,000              | 2  | 4   |



# Demand

A *substitute* is a good that can be used in place of some other good and that fulfills more or less the same purpose.

When the price of a substitute rises, the demand for a good will increase, shifting the demand curve to the right.









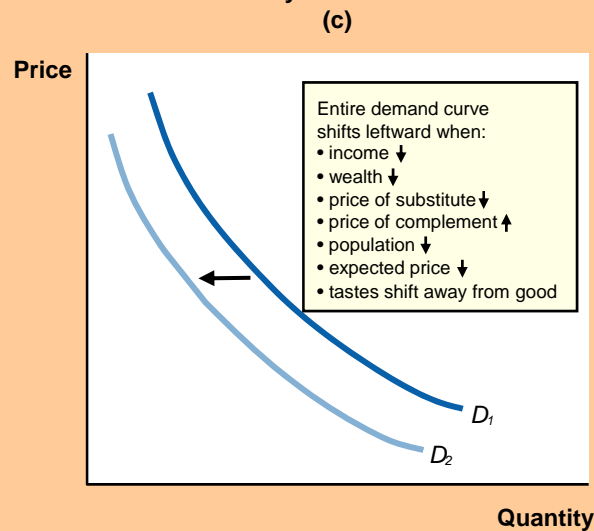
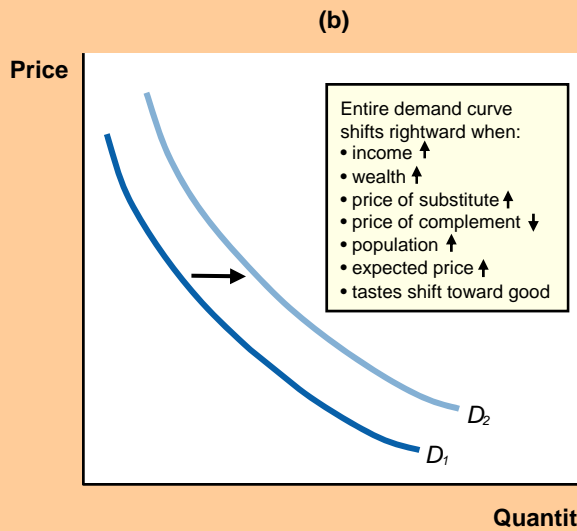
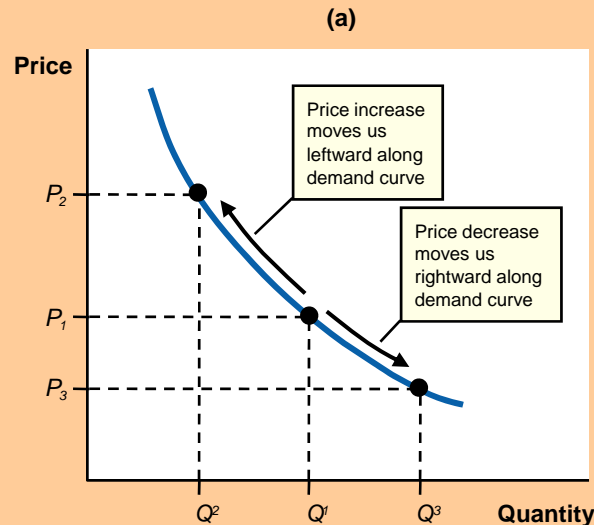
# Demand

A ***complement*** is a good that is used *together with* some other good.

A rise in the price of a complement decreases the demand for a good, shifting the demand curve to the left.



# Changes in Demand and Quantity Demanded





# Supply



- Law of Supply
- The Supply Schedule and the Supply Curve
- Changes in Quantity Supplied
  - Changes in Supply





# Supply



A firm's *production technology* is the set of methods it can use to turn inputs (resources and raw materials) into outputs (goods or services).





# Supply



When a competitive firm comes to a market as a seller, it wants to make the highest possible profit. Firms can choose the level of output they want to produce, but face three constraints:

- Their production technology
  - The prices they must pay for their inputs
  - The market price of their output
- 
- 



# Supply



A firm's *quantity supplied* of any good (# of houses) is the amount it would choose to produce and sell at a particular price.





# Market Quantity Supplied



**Total amount of a good or service that all producers in a market would choose to produce and sell at a given price**





# Law of Supply

**As the price of a good increases,  
the quantity supplied increases**







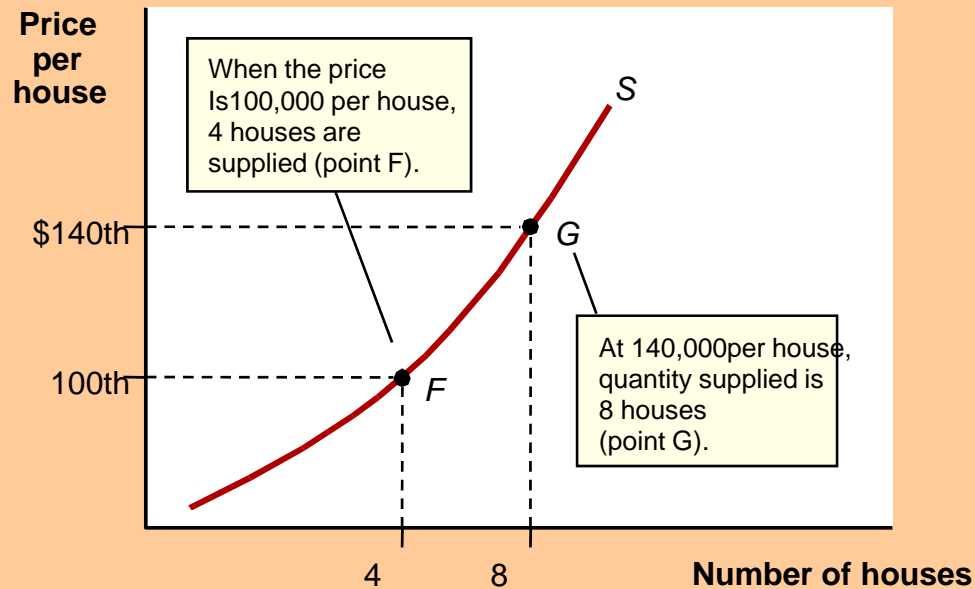
# The Supply Schedule and the Supply Curve

***Supply schedule:*** a list showing the quantities of a good or service that firms would choose to produce and sell at different prices, with all other variables held constant

***Supply curve:*** a graphical depiction of a supply schedule



# The Supply Schedule and the Supply Curve





| Price<br>(per house) | Quantity Supplied<br>(houses per year) |
|----------------------|--|
| \$80,000             | 2                                      |
| 100,000              | 4                                      |
| 120,000              | 6                                      |
| 140,000              | 8                                      |
| 160,000              | 10                                     |



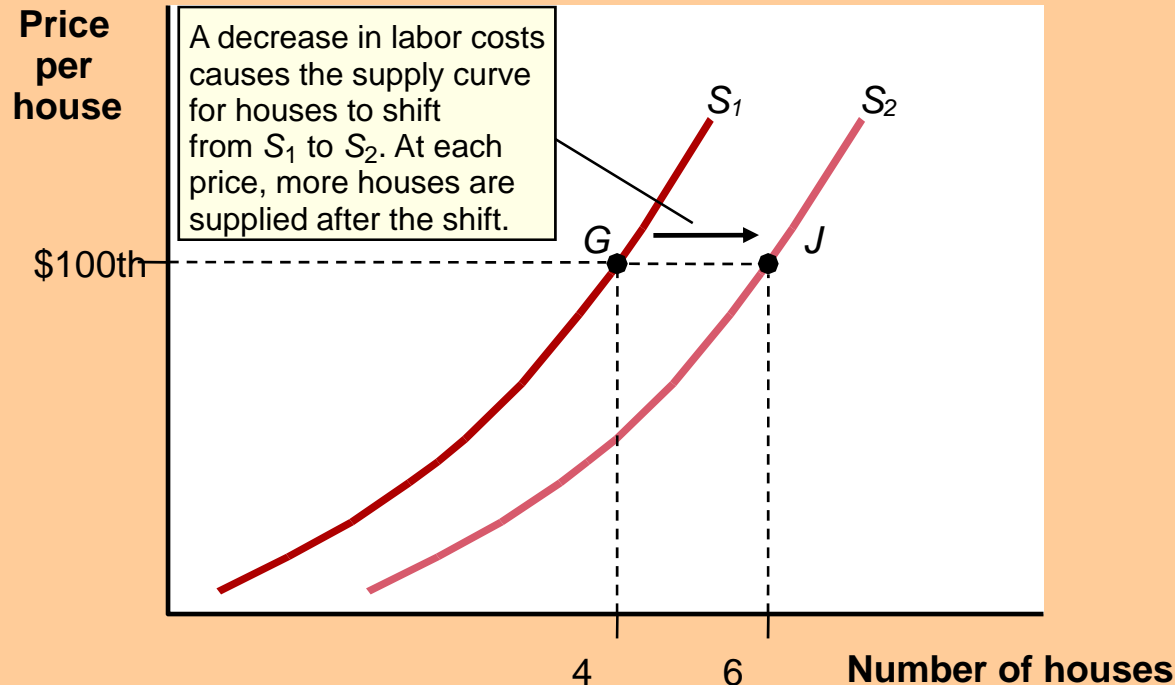
# Changes in Quantity Supplied and Supply

***Change in quantity supplied:***  
movement along a supply curve in  
response to a change in price

***Change in supply:*** shift of a supply  
curve in response to some variable  
*other than price*



# Changes in Quantity Supplied and Supply



| Price<br>(per house) | Original<br>Quantity Supplied<br>(houses per year) | New Quantity Supplied<br>After decrease in labor costs<br>(houses per year) |
|----------------------|--|---|
| \$80,000             | 2  | 4   |
| 100,000              | 4  | 6   |
| 120,000              | 6  | 8   |
| 140,000              | 8  | 10  |
| 160,000              | 10   | 12  |



# Prices of Inputs

- A rise in price of an input causes a decrease in supply that shifts the supply curve to the *left*
- A fall in price of an input causes an increase in supply that shifts the supply curve to the *right*





# Profitability of Alternate Goods



***Alternate goods:*** other goods a firm could produce using some of the same kinds of inputs as the original good

*When an alternate good becomes more profitable to produce because*



- its price rises*
- the cost of producing it falls*
- the supply curve for the original good will shift leftward*







# Technology

*Cost-saving technological advances increase the supply of a good, shifting the supply curve to the right*





# Productive Capacity



- *An **increase** in productive capacity shifts the supply curve **rightward**.*
  - *A **decrease** in productive capacity shifts the supply curve **leftward**.*
- 
- 



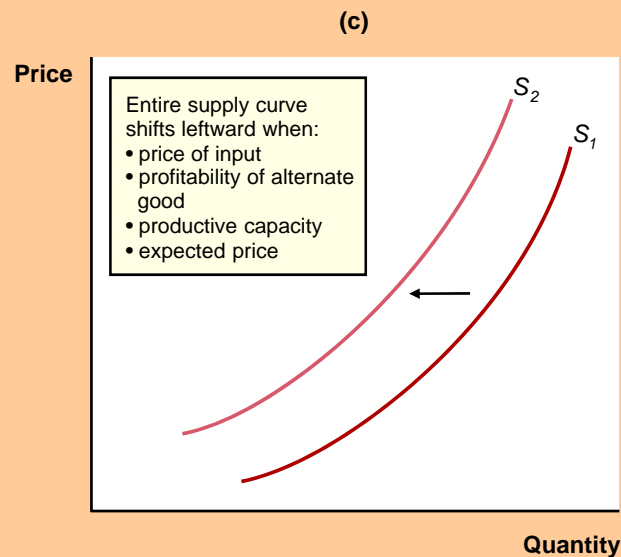
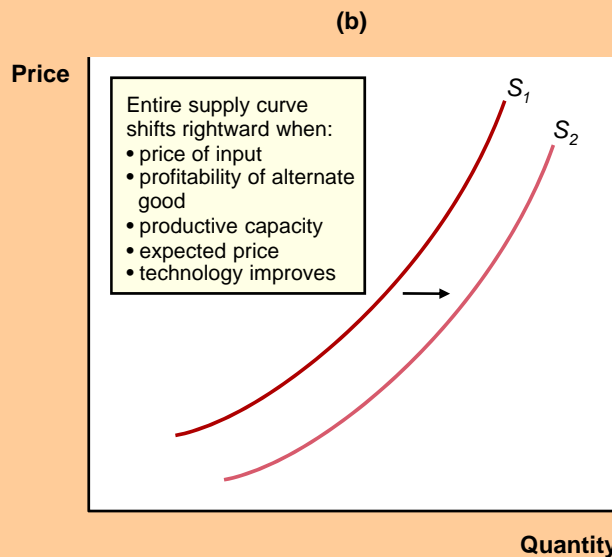
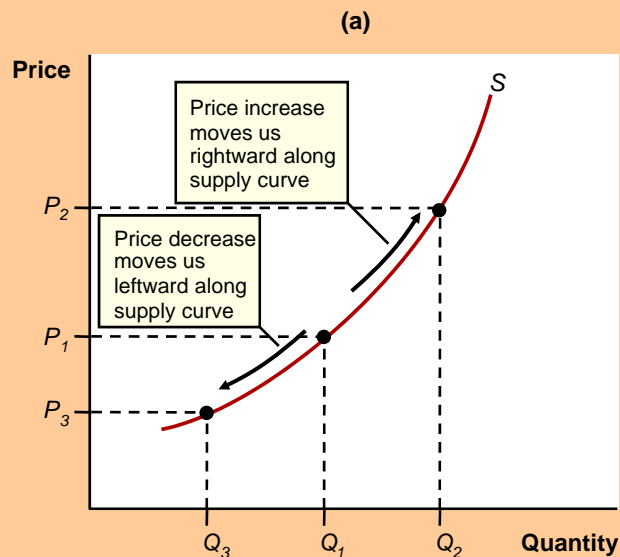


# Expectation of Future Prices

*A rise in the expected price of a good will decrease the supply, shifting the supply curve leftward.*



# Expectation of Future Prices







# Putting Supply and Demand Together

## *Equilibrium*

state of rest - a situation that, once achieved, will not change unless there is a change in something we have been assuming constant



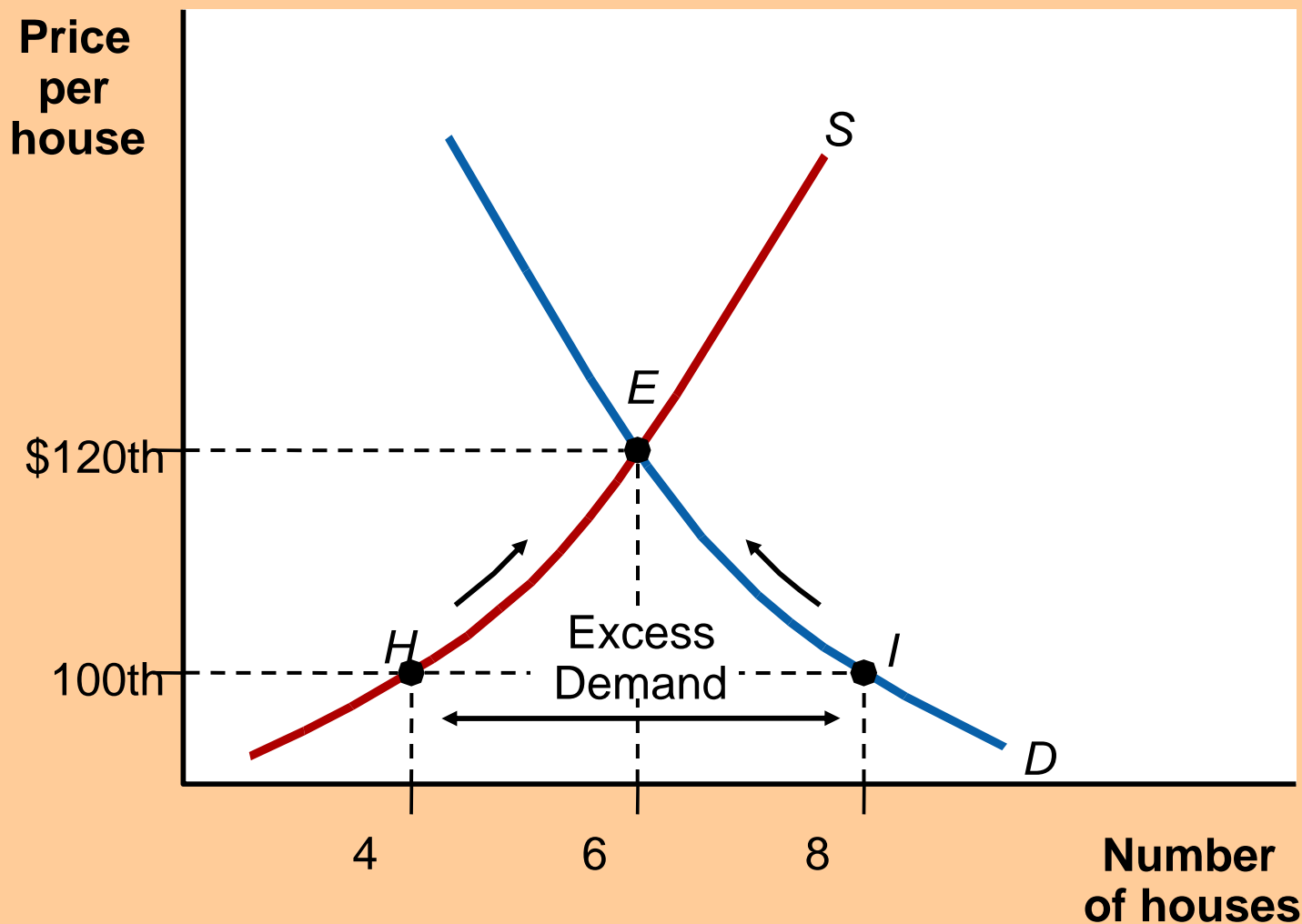


# Putting Supply and Demand Together

To find the equilibrium price and quantity in a competitive market, draw the supply and demand curves. The equilibrium is the point where the two curves intersect.



# Putting Supply and Demand Together





# Putting Supply and Demand Together

## *Excess Demand*

At a given price, the excess of  
quantity demanded over  
quantity supplied





# Putting Supply and Demand Together

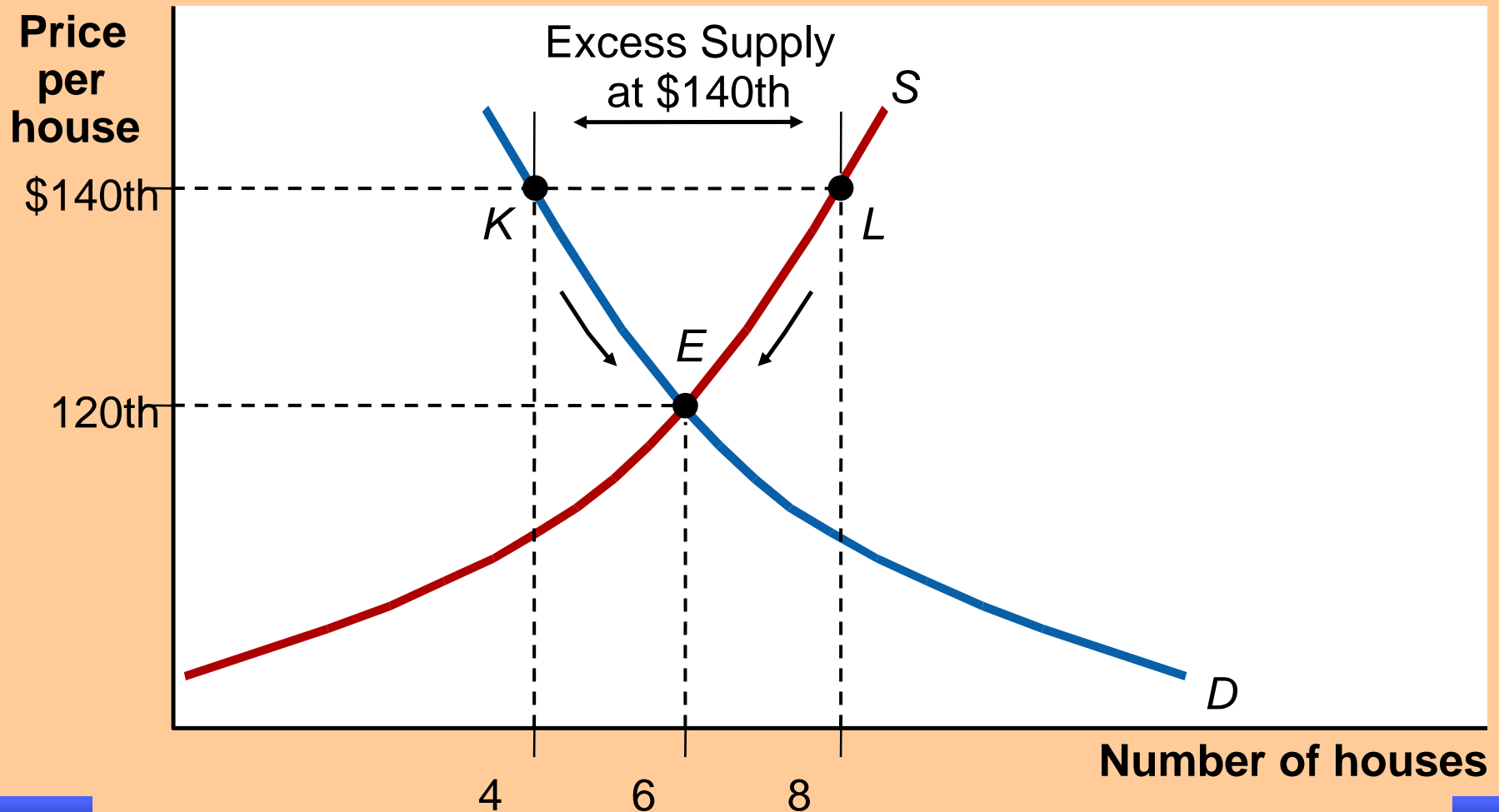


## *Excess Supply*

At a given price, the excess of  
quantity supplied over  
quantity demanded

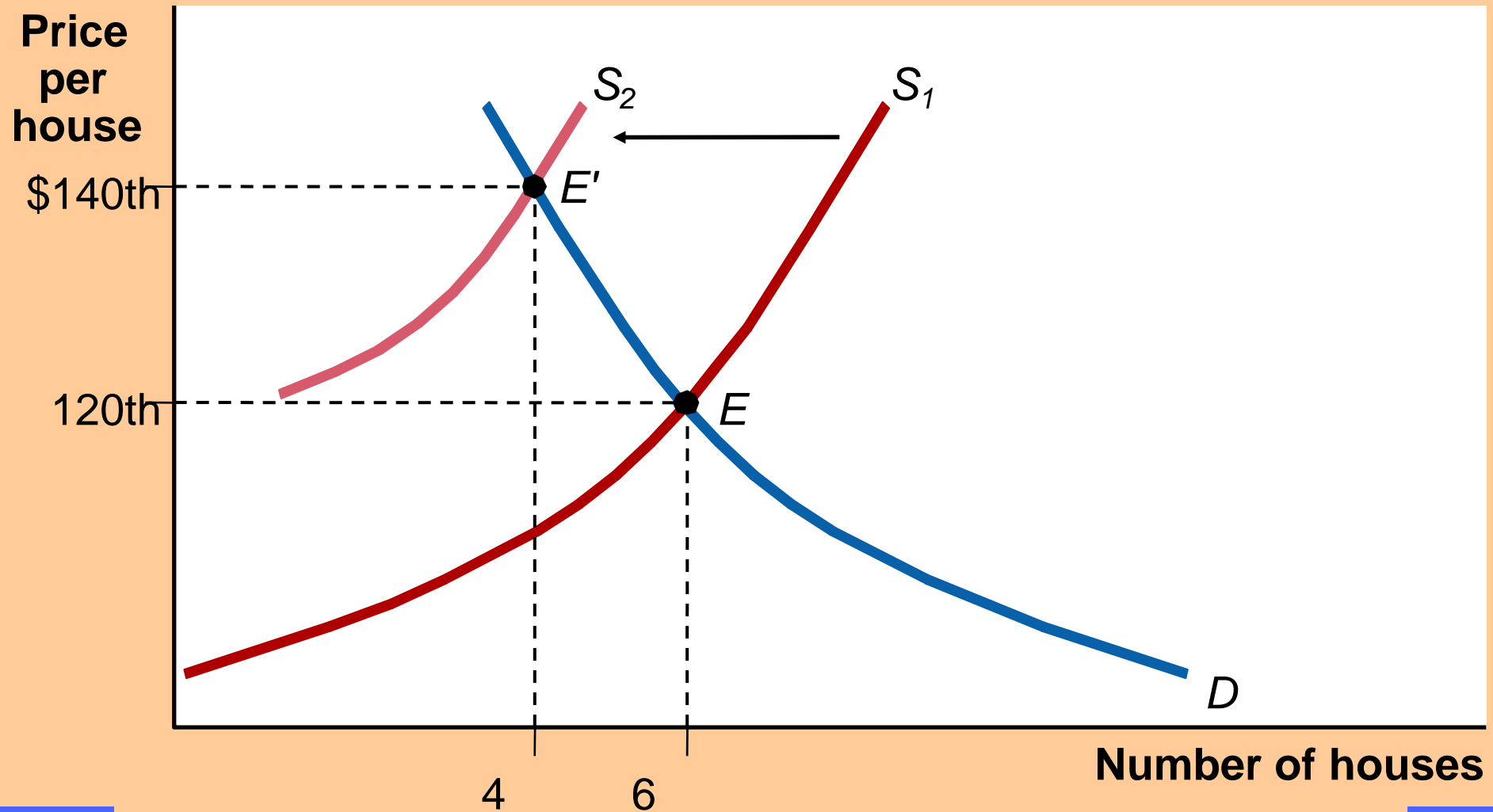


# Excess Supply and Price Adjustment





# A Shift of Supply and a New Equilibrium





# Effect of Supply and Demand Shifts on Equilibrium Price and Quantity

|   | Increase<br>in Demand<br>(Rightward Shift) | No Change<br>in Demand  | Decrease<br>in Demand<br>(Leftward Shift) |
|---|--|-------------------------|---|
| Increase in Supply<br>(Rightward Shift) | $P?Q\uparrow$                              | $P\downarrow Q\uparrow$ | $P\downarrow Q?$                          |
| No Change in Supply                     | $P\uparrow Q\uparrow$                      | No change in $P$ or $Q$ | $P\downarrow Q\downarrow$                 |
| Decrease in Supply<br>(Leftward Shift)  | $P\uparrow Q?$                             | $P\uparrow Q\downarrow$ | $P?Q\downarrow$                           |



# The Four Step Procedure

- *Key Step 1* - Characterize the Market
  - *Key Step 2* - Identify the Goals and Constraints
  - *Key Step 3* - Find the Equilibrium
  - *Key Step 4* - What Happens When Things Change
- 
- 



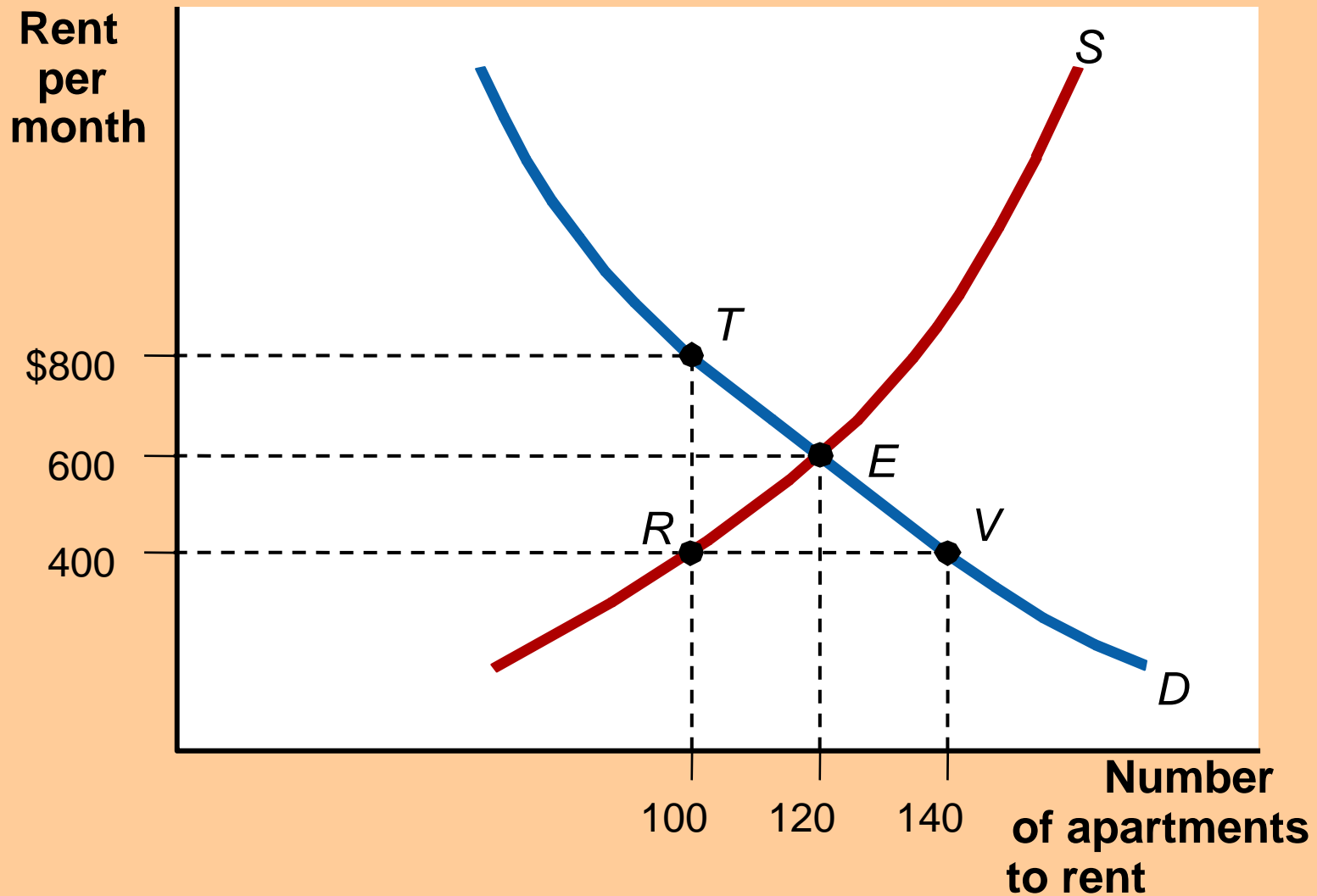
# Government Intervention in Markets

## *Price Ceiling*

A government-imposed  
maximum price in a market





# Price Ceiling – Rent Control





# Government Intervention in Markets

- A price ceiling creates a shortage, increasing the time and trouble required to buy the good.
  - While the price decreases, the opportunity cost may rise.
- 
- 

# Shilling, Ch.19:

## Real Estate Markets

- Characteristics
- Factors of supply and demand
- Competitive markets?



# Market characteristics

- Local character
- Not a standardized commodity
- Fluctuations in value, # of transactions
- Poor adjustment of supply and demand
- Absence of stabilizing factors
- Private transactions



# Factors of supply and demand

- Population: size, age/sex mix, family composition: D
- Employment, wage levels, income: D
- Personal savings, mortgage funds, interest rates: D
- Building quality: D
- Availability and costs of land, labor, construction materials, construction technology : S
- Rent levels & rent control: S&D
- Taxation, land control: S&D

# Competitive real estate market?

- No government control
- Perfect information
- Large number of participants
- Homogeneous commodity
- Mobility

=> Not competitive locally, more competitive nationally

# Shilling, Ch 2

## Investment environment

- The decision making cycle: purchase, management & administration, sale
- Market participants
- Determinants of real estate inv. Spending
- Micro demand for real estate

# The decision making cycle: purchase

- Objectives & constraints: type of property desired
- Ownership rights: limitations of the rights
- Contract: investor-broker-seller
- Financing: cash, mortgage, income
- Market analysis: supply and demand
- Property as investment: present value, risk, required rate of return

# The decision making cycle:

- Management & administration
- Sale: asking price, market value, provide title evidence and deed, seller-broker relationship

# Market participants

- Real estate brokers & syndicators: Lexxus
- Equity investors and lenders: financing
- Property developers: ICKM
- Other: appraisers, architects, community planners, real estate consultant, real estate attorneys (title search and examination): register of real estate ('katastr nemovitosti')