



# ASOSIY TUSHUNCHALAR:

**1 Moddiy nuqta**

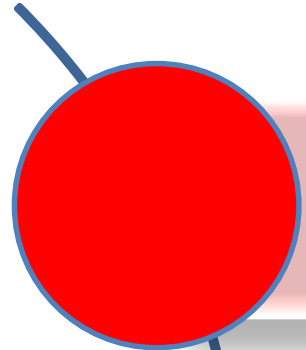
**2 Trayektoriya**

**3 Yo'l va ko'chish**

**4 Mexanik harakat**

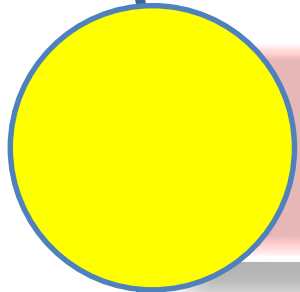
**5 Ilgarilanma harakat**

# M e x a n i k a



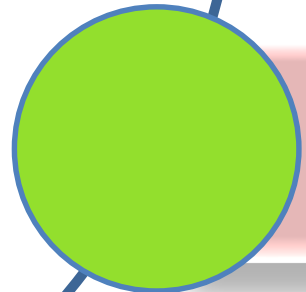
**Kinematika**

**Harakat**



**Dinamika**

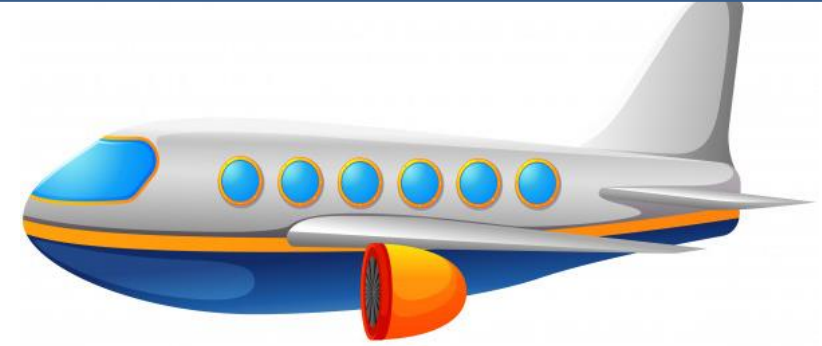
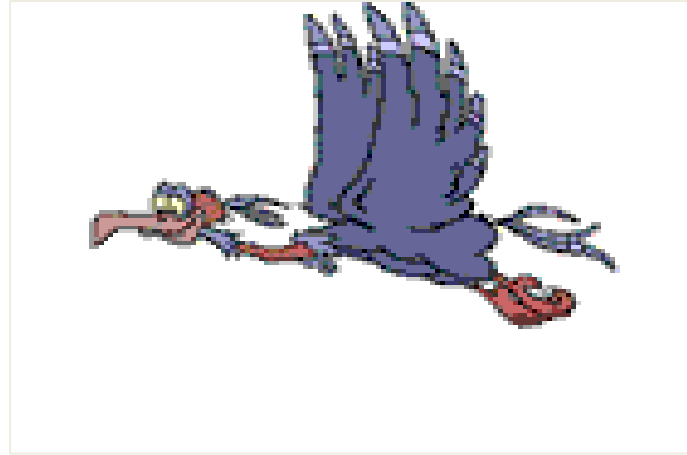
**Nima uchun?**



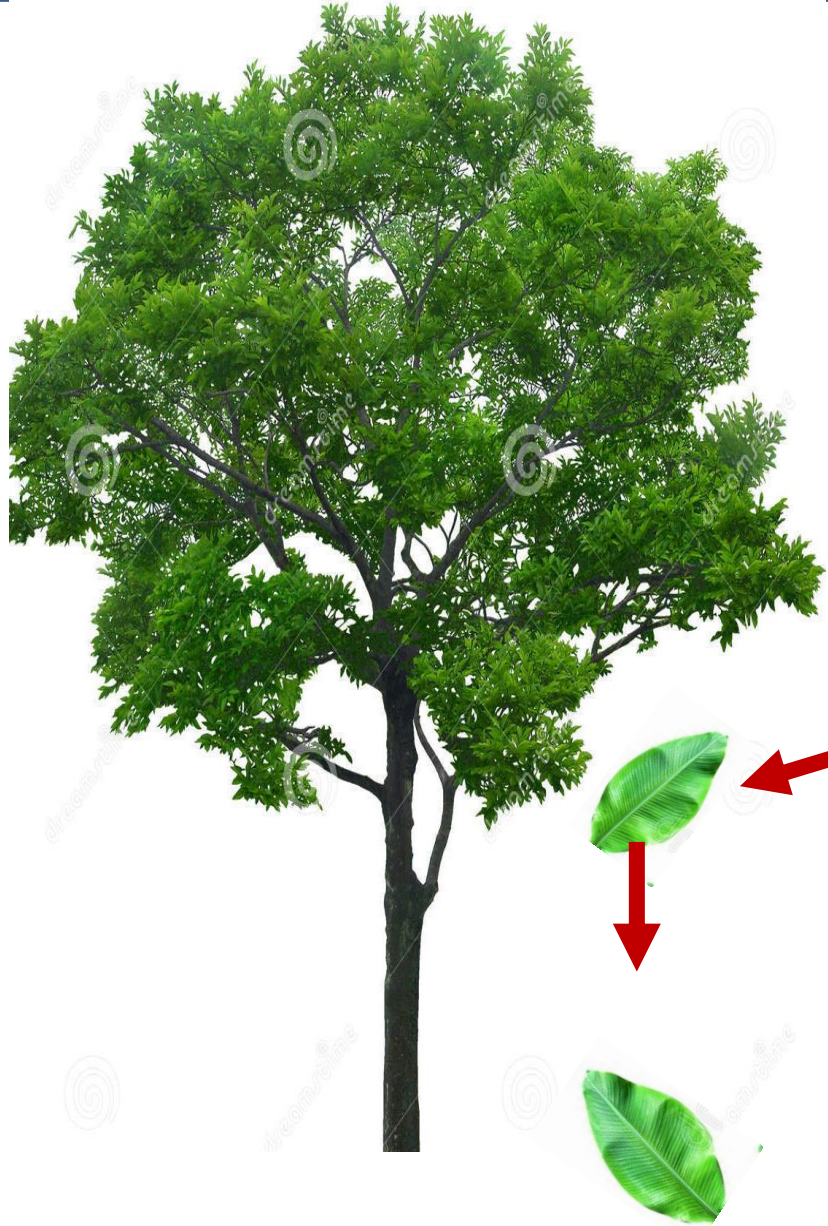
**Statika**

**Tinch turgan  
jismlar**

# KINEMATIKA

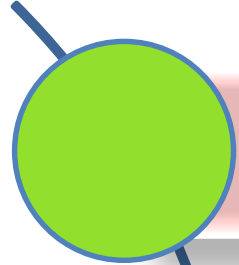


# KINEMATIKA

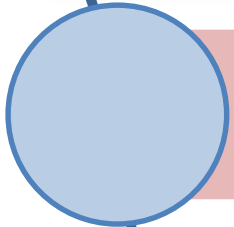


**Harakat**

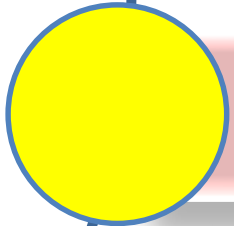
# Kinematikaning asosiy tushunchalari



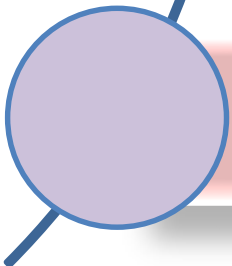
**Moddiy nuqta**



**Trayektoriya**



**Ko'chish**



**Yo'l**

# Moddiy nuqta nima?

Muayyan sharoitda o'lchami va shakli hisobga olmasa ham bo'ladigan jism **moddiy nuqta** deb ataladi.

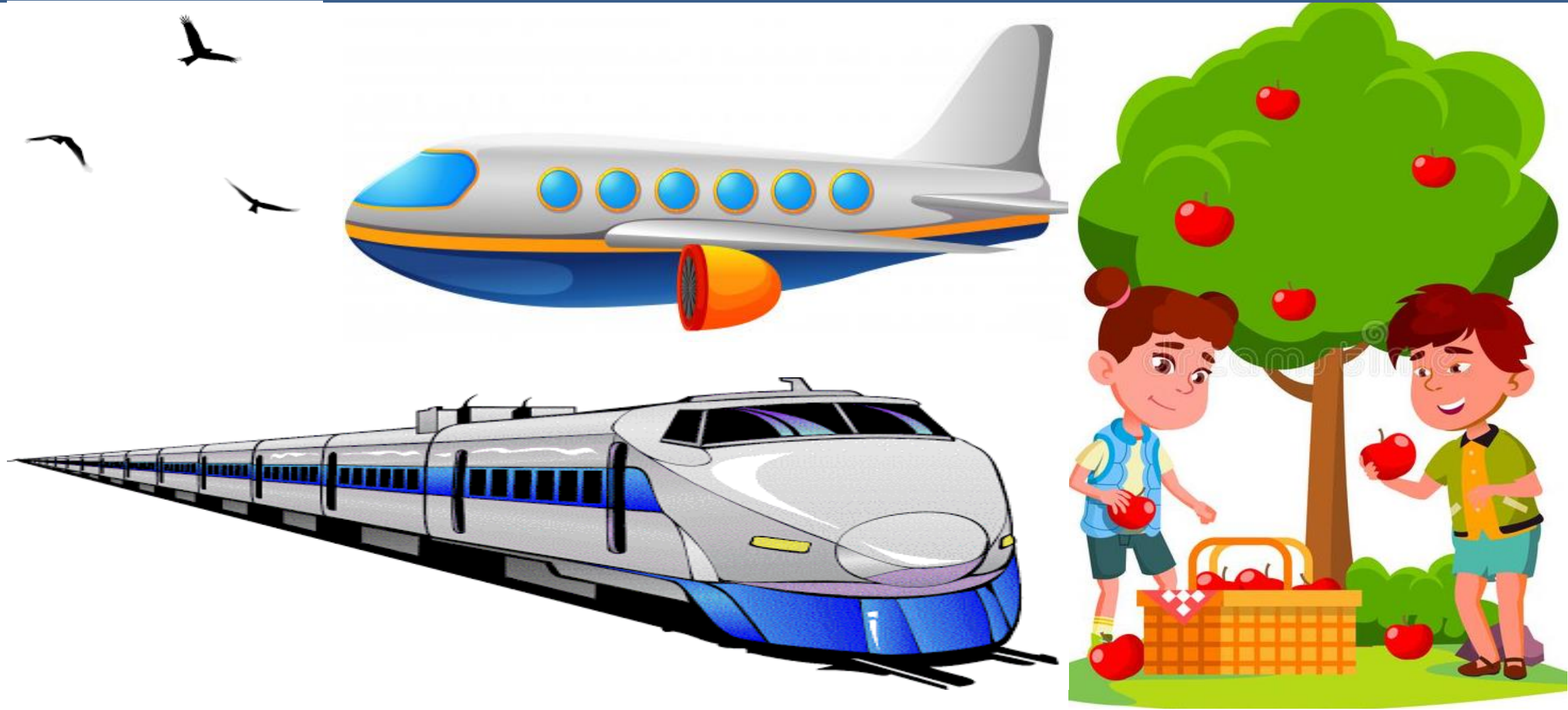


# Moddiy nuqta nima?





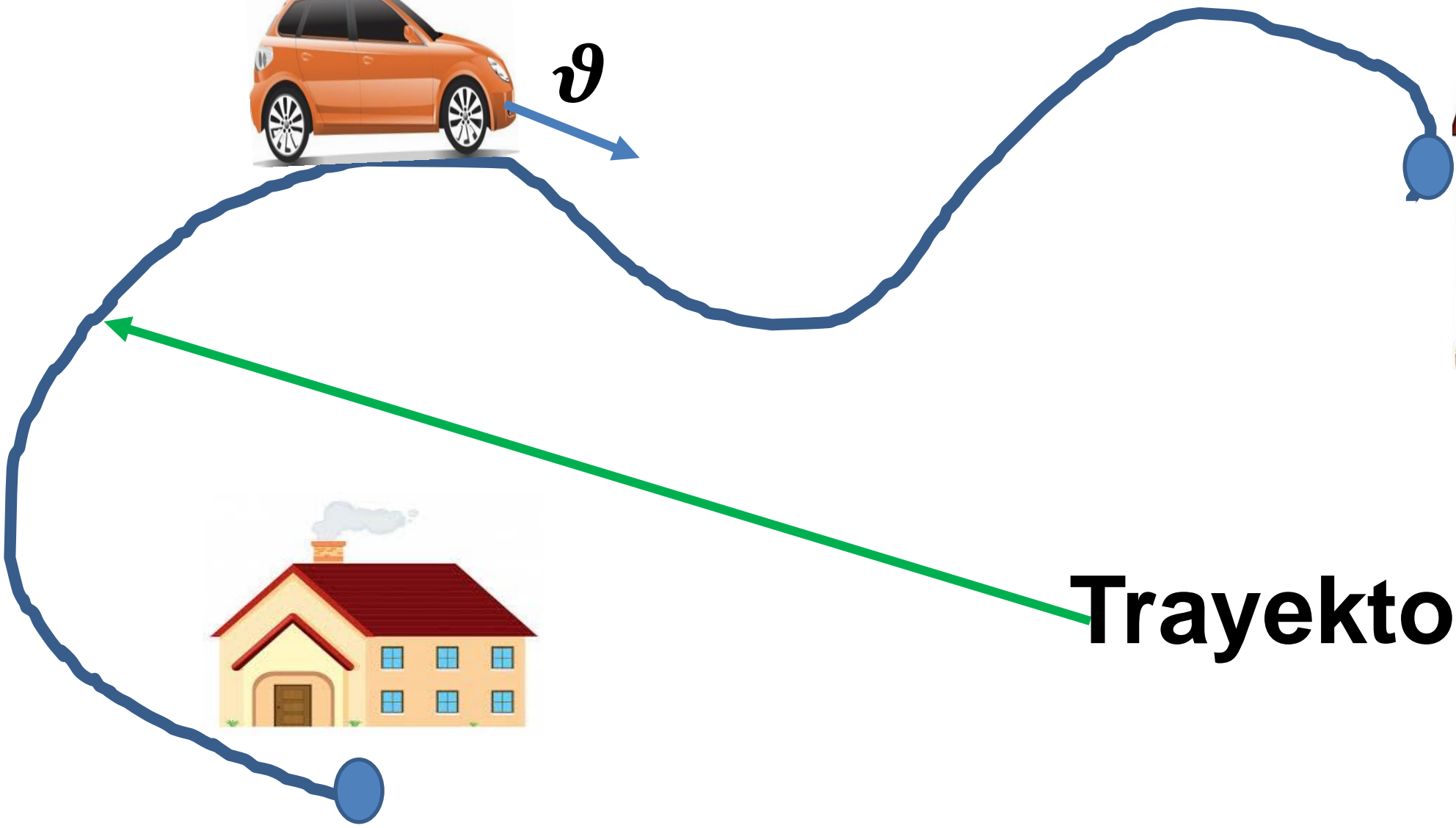
# Jism qaysi holatda moddiy nuqta bo'la oladi ?



# Trayektoriya nima?

Moddiy nuqtaning o'z harakati davomidagi o'zidan keyin qoldirgan izi yoki chizgan chizig'iga **trayektoriya** deb ataladi.

# Trayektoriya nima?



**Trayektoriya**

# Ko'chish deb nimaga aytiladi?

Moddiy nuqtaning o'z harakati davomidagi boshlang'ich va oxirgi nuqtalarini tutashtiruvchi yo'nalishli to'g'ri chiziqqa ko'chish deb ataladi.

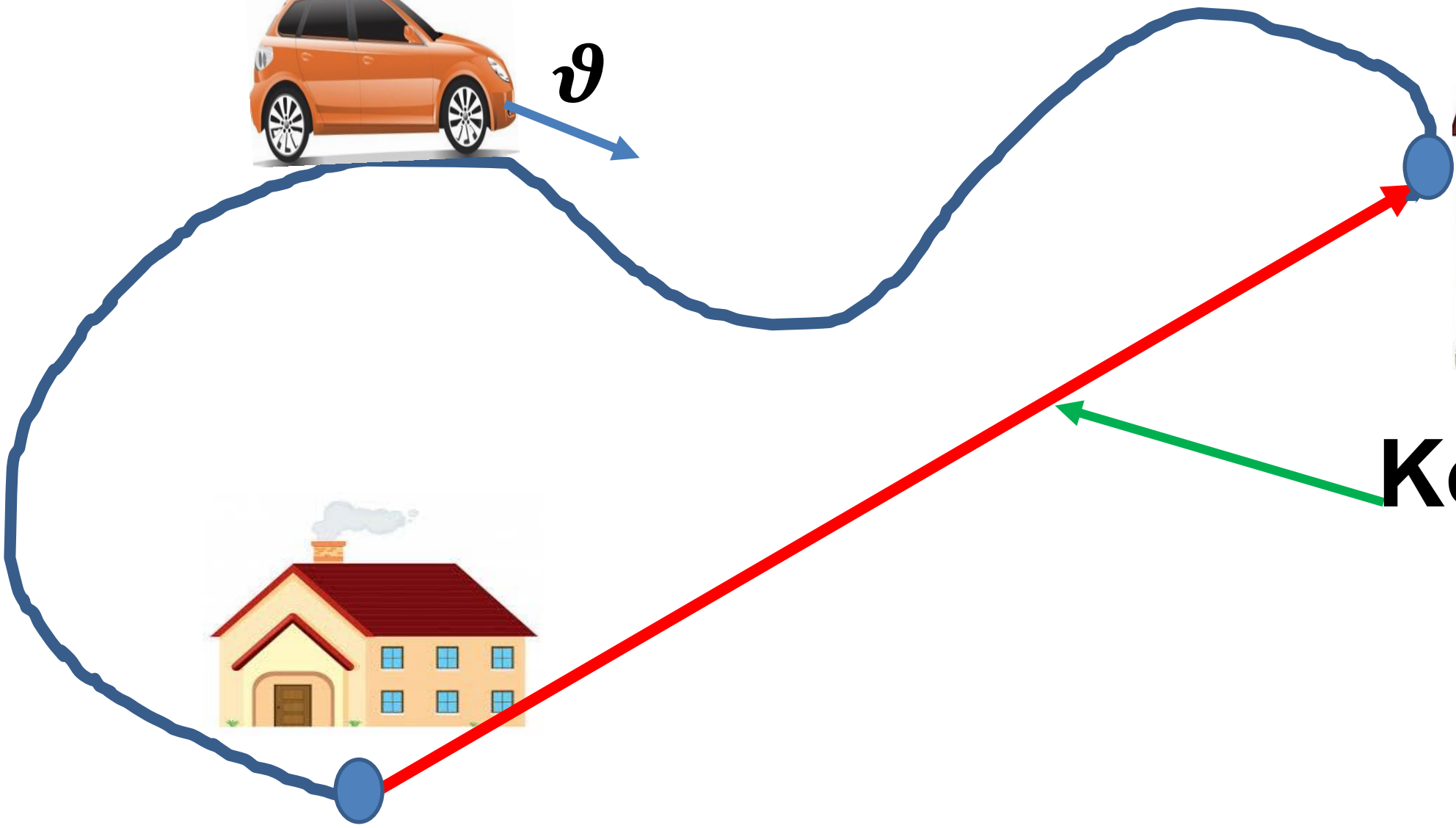
# KO'CHISH



၁



**Ko'chish**



# Yo'l deb nimaga aytiladi?

Moddiy nuqtaning o'z harakati davomidagi trayektoriyasining uzunligiga bosib o'tilgan yo'l deb ataladi.

# YO'L



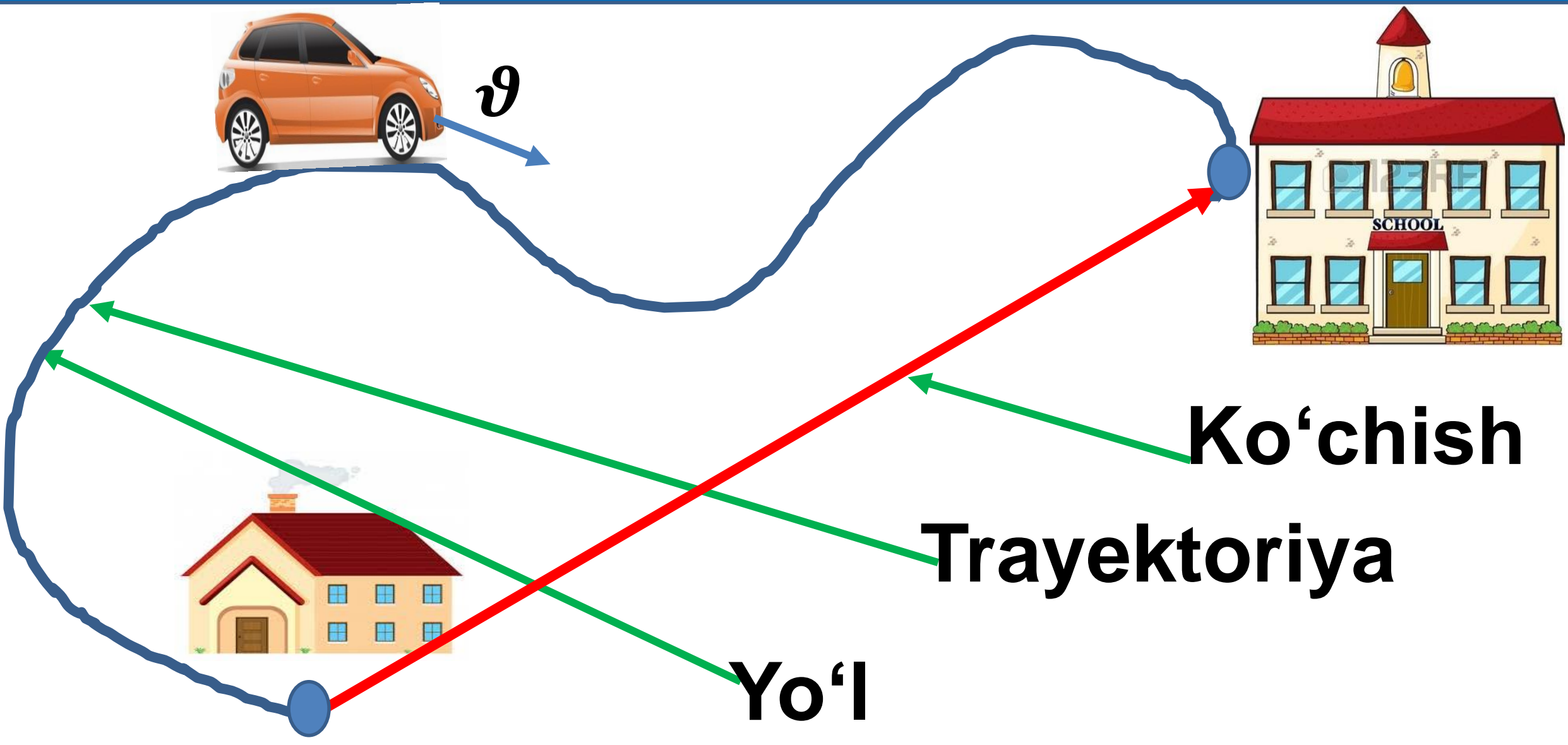
$v$



**Ko'chish**

**Trayektoriya**

**Yo'l**





# Topshiriq

Ertalab avtobus spidometrning ko'rsatkichini nol qilib avtoturargohdan yo'lga chiqdi. Kechqurun qaytib kelganida spidometrning ko'rsatkichi 500 km ni ko'rsatdi.

**Savol:** Avtobusning bosib o'tilgan yo'li va ko'chishi qanchaga teng?



# Javob:

**Bosib o'tgan  
yo'l**



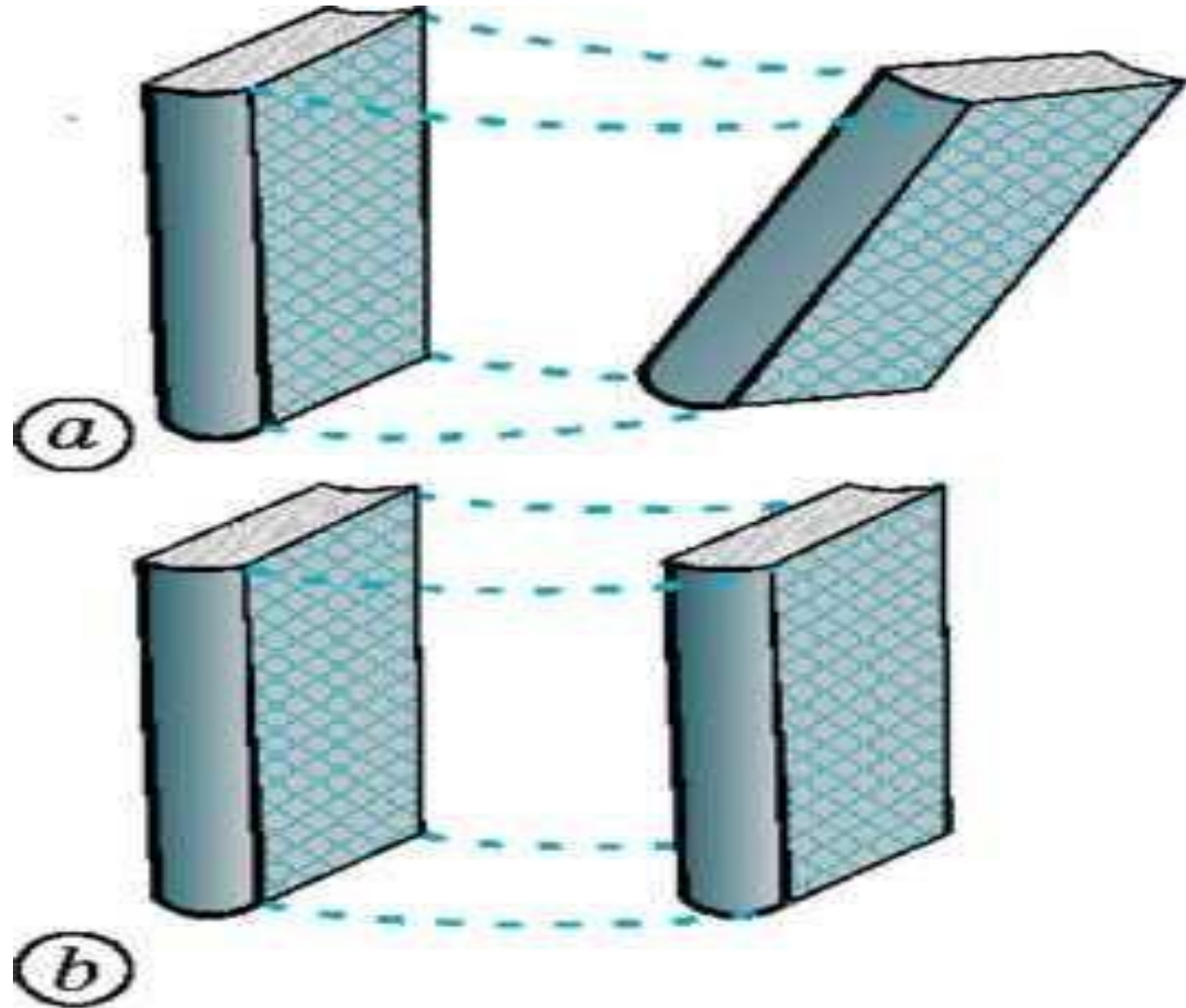
$$S = 500 \text{ km}$$

**Ko'chish**



$$L = 0$$

# ILGARILANMA HARAKAT



# Mustaqil bajarish uchun topshiriqlar:

1. Bitta jismni kuzatilayotgan turli jarayonlarning birida moddiy nuqta deb olish mumkin bo'lgan, ikkinchisida esa mumkin bo'lmagan hollarga misollar keltiring.
2. Uyingizdan maktabgacha borish trayektoriyasi va ko'chishini chizib, ular orasidagi masofaning farqini chamalab ko'ring.

**Aziz o'quvchilar,  
Shaxsiy gigiyena qoidalariga amal qiling  
va qo'lingizni tez-tez sovunlab yuvishni  
unutmang!**



# Fazoning asosiy xossalari:

**Haqiqattan  
ham  
mavjudligi,**

**materiya  
bilan  
ajrajmasligi,**

**cheksizligi,**

**uch  
o'lchamlili  
gi**

Barcha fizik obyektlarning bo'yi, eni va balandligi mavjud.