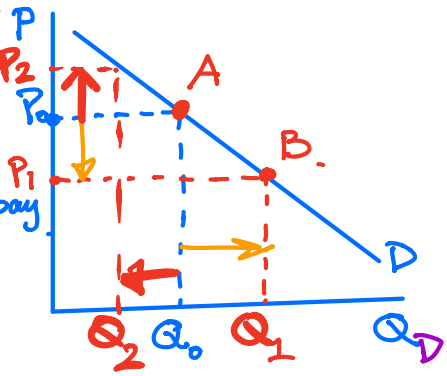
When price of pork is higher quantity demanded the demand of pork is lower.

Chapter 4 Demand

We will discuss the demand and supply of a perfect competition and how the market equilibrium is attained.



Demand is the *relationship* (a function) between the price and the quantity the buyer(s) is (are) *willing* and *able* (can afford to pay) to buy.

Ex Do you have the demand to buy a Tesla at 6m฿.

- At a given price, the quantity bought is called the ***quantity demanded***.
- Is this statement correct? 'When price decreases, the demand is higher.'

quantity demanded.

Not willing to pay → no demand.
not enough money

$y = 2x + 5$ ← the relationship does not change.

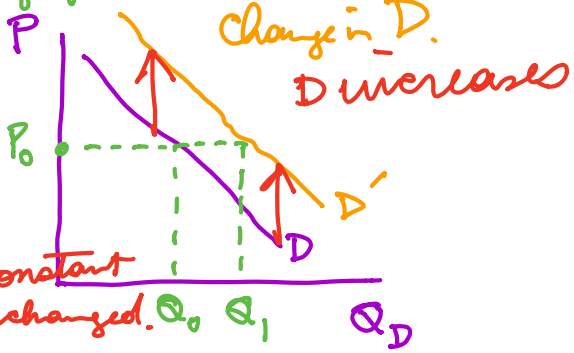
$x = 1 \rightarrow y = 7$
$x = 2 \rightarrow y = 9$

Because the price of pork is higher, the quantity demanded for pork is lower.

Change in Demand and Change in Quantity Demanded

To be discussed more later.

- *Demand increases*: At a given price, the quantity demanded increases.
- *Quantity Demanded increases*: When price decreases the quantity demanded increases.



Change in D.
D increases

There is no change in D being constant or unchanged.

Law of Demand: Given all factors being equal, if the price decreases ⟹ the quantity demanded increases.

increases decreases.

⇔ Price and quantity demanded have inverse relationship
⇔ Demand curve has negative slope

⇒ is not 100% true for all products.

some product when price is higher ⇒ quantity demanded can be higher even when all factors being equal.

Example: Luxury goods.

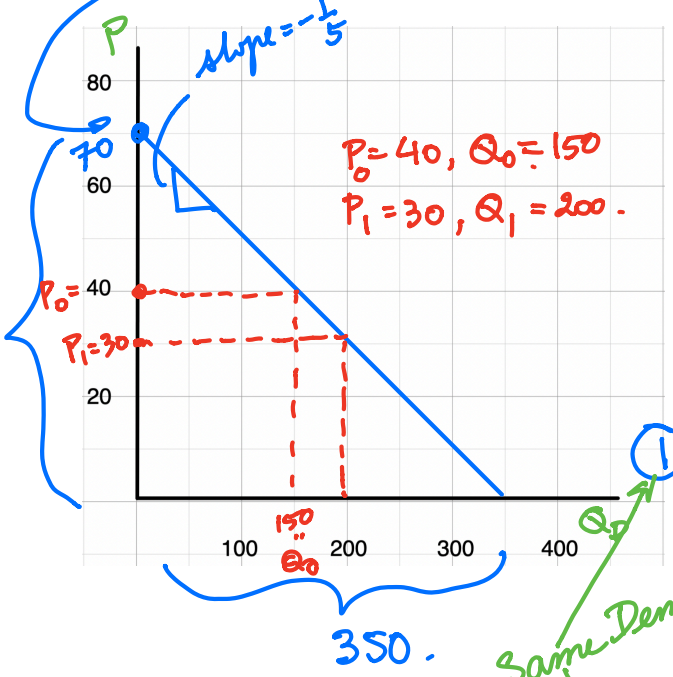
Example: A demand curve is given by a function,

Linear Demand. $Demand: P = 70 - \frac{1}{5}Q_D$ (slope)

$(Q_D=0, P=70)$
$(P=0, Q_D=350)$

slope $= -\frac{70}{350} = -\frac{1}{5}$

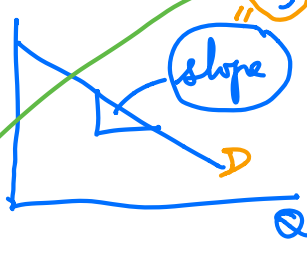
Plot of Demand Curve:



Economists always draw Demand with Q_D on horizon axis. P on vertical axis.

But when economists write equation for demand, they can write

① Demand: $P = 70 - \frac{1}{5}Q_D$ ✓



same Demand.

$P = 70 - \frac{1}{5}Q_D$

$-\frac{1}{5}Q_D = -70 + P$

$Q_D = 350 - 5P$

② Demand: $Q_D = 350 - 5P$. ✓

so -5 is not the slope of D

but -5 is $\frac{1}{\text{slope}}$ of D

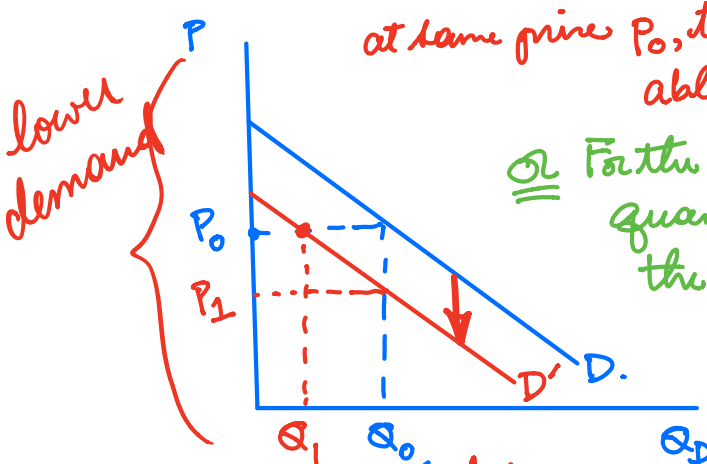
Factors that can change the Demand

1. Income

COVID-19 causes the buyer's income decreases.
some might have higher income Grab, Lineman, health care workers

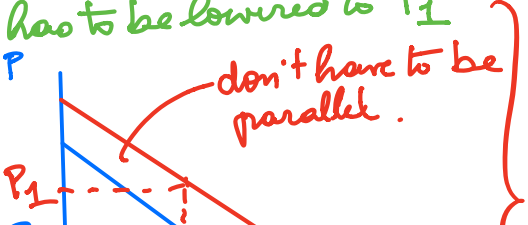
their demand for a given product is lower.
food

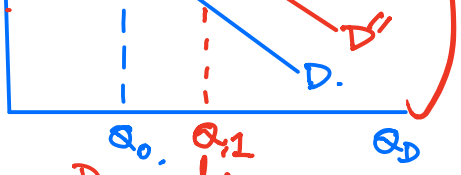
⟹ Demand decreases.



at same price P_0, the buyers are willing and able to buy less from Q_0 to Q_1.

≡ For the buyers to buy the same quantity demanded at Q_0 the price has to be lowered to P_1





Demand increases

2. Population (number of buyers)

more buyers ⇒ higher demand.
Free trade agreement.

Instant Noodle Lower income
⇒ higher demand.

3. Taste of Consumers fashion.

4. Expectation gasoline
⇒ Buy more today!

5. Prices of related goods

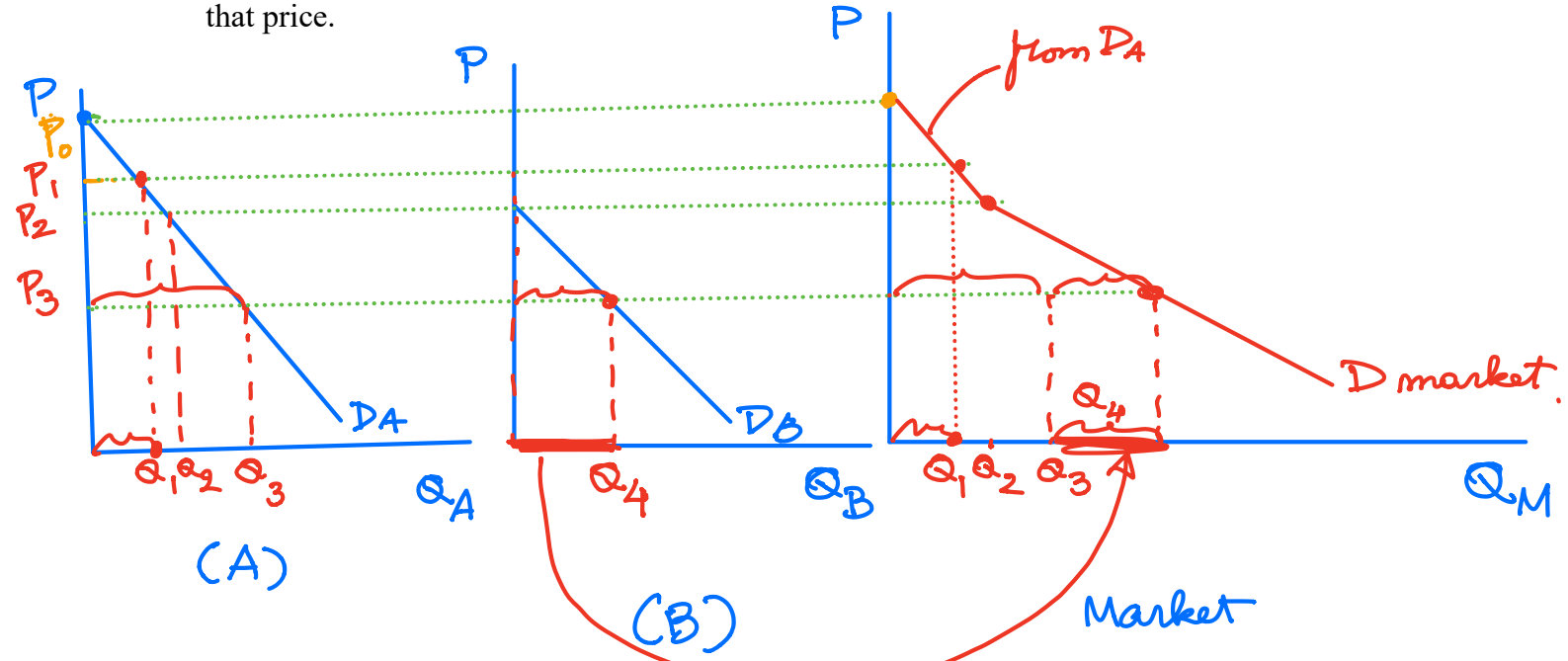
a. Substitutes: Coffee + Tea. Pepsi + Coke.
If the price of Pepsi is higher, the demand for Coke is higher. (same direction)

b. Complementary: X & Y are consumed together.

Ex. Car + gasoline. If gasoline price is lower, the demand for car is higher. (opp. direction)

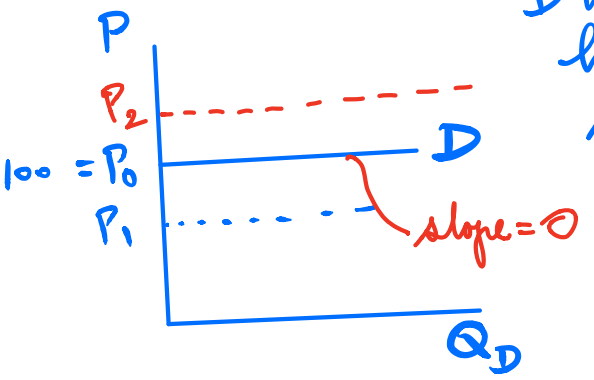
Individual and Market Demands

- Market demand is the summation of individual demands of all consumers in the market.
- At each price, the quantity demanded of the market is sum of all quantities demanded of all consumers at that price.

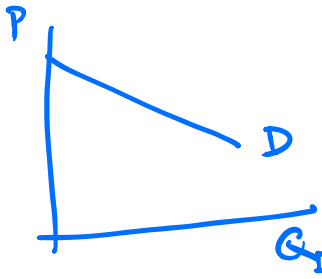


Extreme Cases of Demand Curve

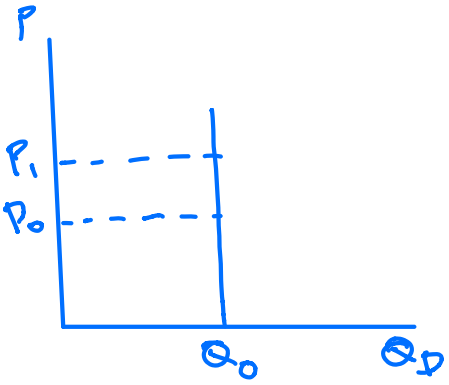
- Horizontal Demand



D is parallel to horizontal axis.
At P_0, the quantity demanded is infinity
ie. Q_D can be as much as available in the market.
- at P_0, the seller(s) can sell any quantity they can produce.
at price $P_1 < P_0$ - still want to buy "infinity"
But at price $P_2 > P_0$, quantity demanded is zero.



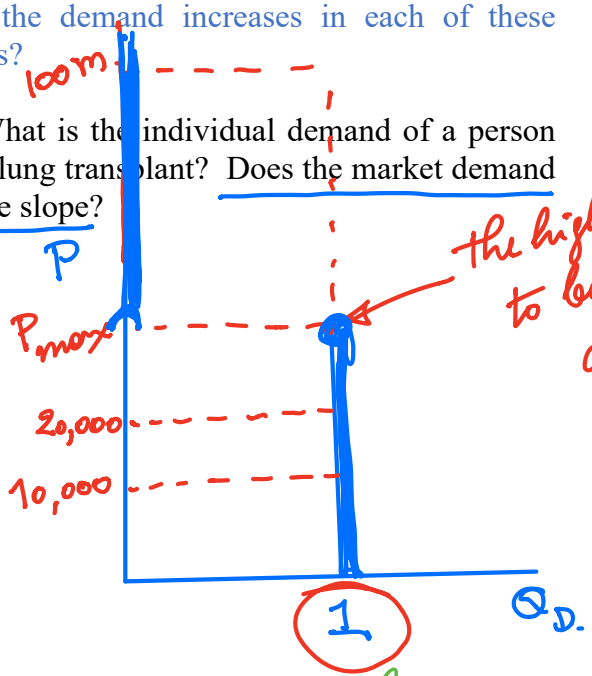
- Vertical Demand



at price P_0 or P_1, the quantity demanded is still Q_0.

HW How the demand increases in each of these extreme cases?

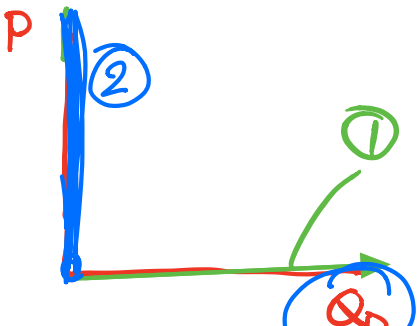
Example: What is the individual demand of a person who needs a lung transplant? Does the market demand has a negative slope?

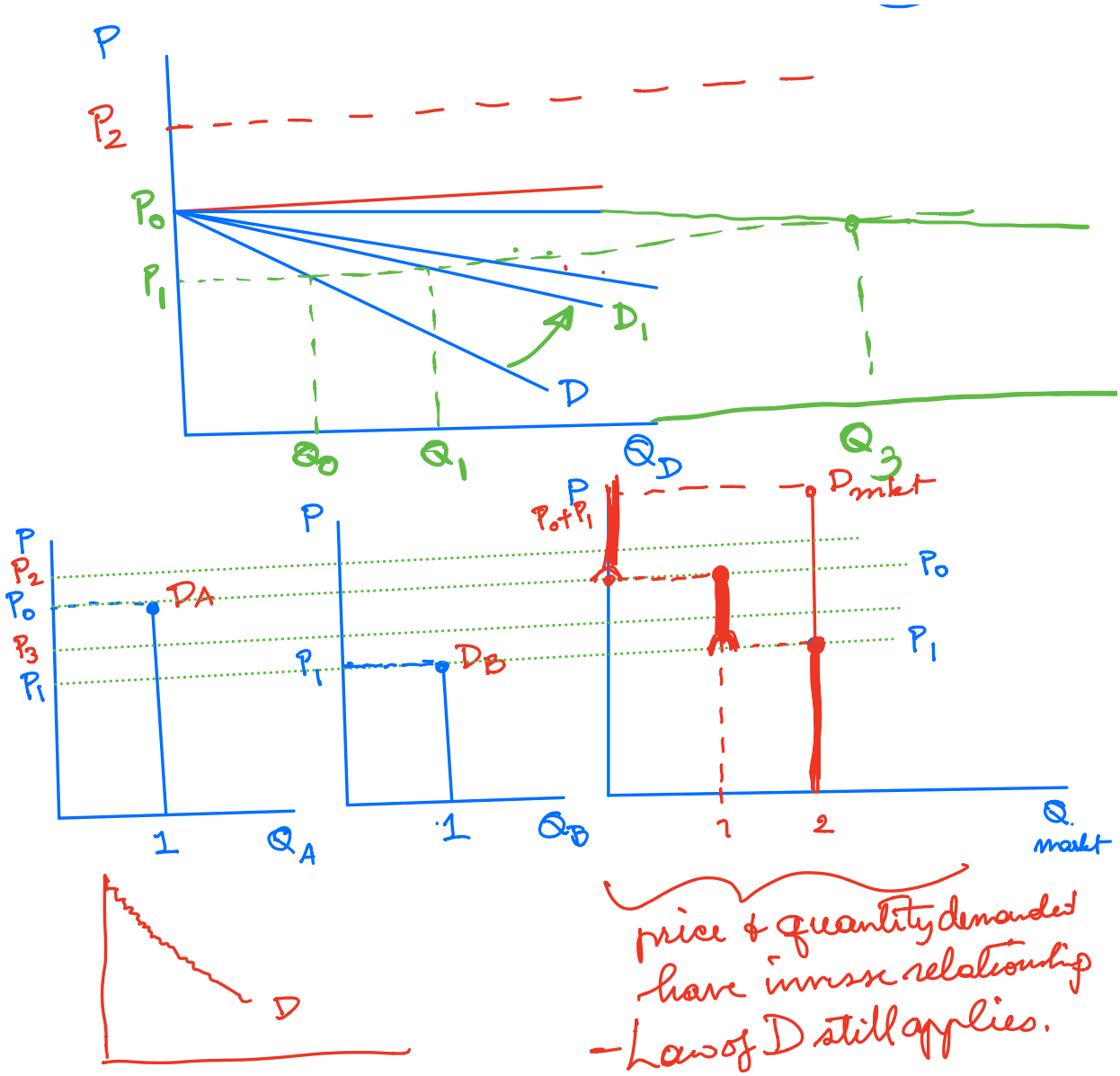


the highest price he is willing + able to buy is all his assets + his ability to borrow — which is always finite.

If price $\leq P_{max}$, he buys $Q_D = 1$
If price $> P_{max}$, $Q_D = 0$.

Demand for lung transplant of a person whose lung was destroyed by Covid-19.




P
P2
P0
P1
D1
D
Q0
Q1
QD
Q3
Pmkt
P0+P1
P0
P1
P
P2
P0
P3
P1
DA
1
QA
P1
DB
1
QB
1
2
Q. market
D
price & quantity demanded have inverse relationship
- Law of D still applies.

Question: If individual demands of consumers are all horizontal but at different prices, what will be the market demand?