

- Japan has absolute advantage (is more efficient) at producing both goods
- However Japan is relatively more efficient (comparative advantage) when producing cars
 - It produces Machines at a ratio of 2:1 (40/20) versus Spain and cars at a ratio 3:1 (15/5)
 - Japan should specialise in producing Cars and trade for Machinery

- Both Countries Specialise

Country	Commodities	
	Machines	Cars
Spain	$(20 \times 2) = 40$	
Japan		$(15 \times 2) = 30$
Total Output	40	30

- Option 1

- Production for cars has increased by 50% (10/20).
- Production of Machines has decreased by 33% (20/60).
- Assuming there are only two countries in the world, as the 50% increase in car production is greater than the 33% decrease in Machines production the world is using its resources more efficiently and both countries benefit from trade

- Option 2
 - If Spain can give away less than 4 Machines ($20/5$) for each Car it imports, it will benefit from trade
 - If Japan can give away less than 0.375 Cars ($15/40$) for each Machine imports, it will benefit from trade
- Option 3
 - If Spain can get more than $1/4$ Car ($5/20$) for every Machine it exports it will benefit from trade
 - If Japan can get more than 2.66 ($40/15$) Machines for every Car it exports, it will benefit from Trade

- Terms of Trade
 - The number of imports that can be purchased with a unit of export
- Spain
 - 1 unit of Car is worth 4 Machines ($20/5$)
 - 1 Unit of Machinery is worth 0.25 ($5/20$) a unit of car
- Japan
 - 1 Unit of Car is worth 2.6 machines ($40/15$)
 - 1 Unit of Machinery is worth 0.375 car ($15/40$)
- Terms of Trade
 - 1 unit of cars worth between 2.6 and 4 Machines
 - 1 machine is worth between 0.25 and 0.375 a unit of cars