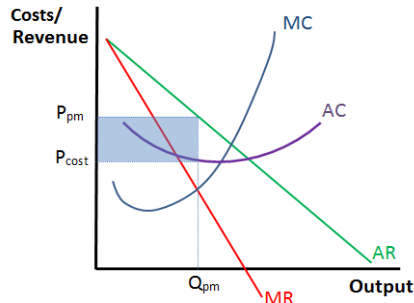


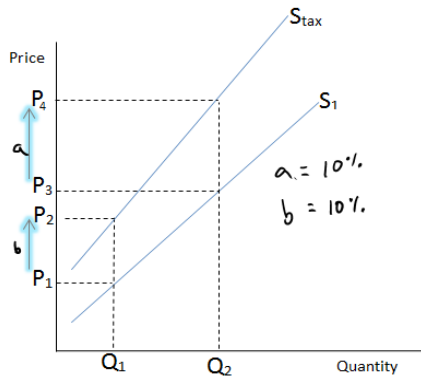
# MICROECONOMICS DIAGRAMS

## 1. Abnormal Profit



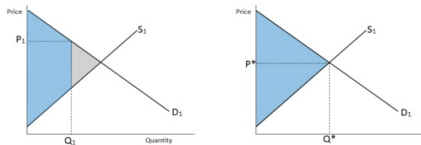
At  $Q_{pm}$ ,  $P_{pm} > P_{cost}$   
All costs are covered and then some!

## 2. ad valorem tax



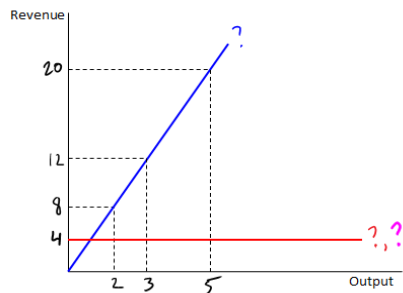
eg a VAT or sales tax

## 3. Allocative Efficiency



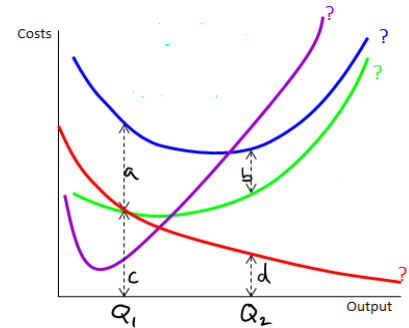
Community Surplus is maximized at  $P^*$

## 4. AR, MR: Perfect Competition



The red line is actually 2 lines that are equal to each other.

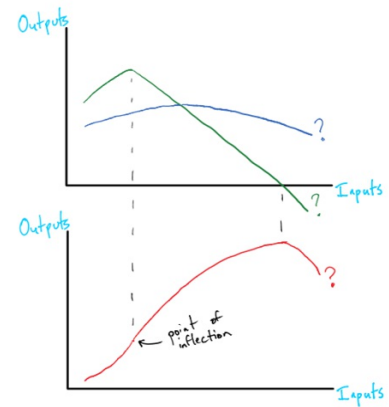
## 5. Average Fixed Costs



The red line diminishes, but never becomes zero.

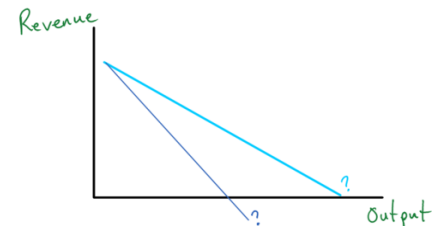
"a" (blue to green) is equal to "c" (red to axis)  
 $b = d$   
 $(c/q_1) = (d/q_2)$

## 6. Average Product



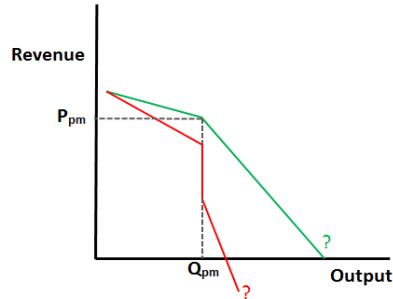
The blue line shows productive efficiency at its highest point (where the green line intersects it)

## 7. Average Revenue: Imperfect Competition



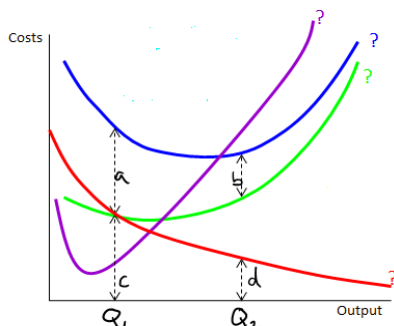
The light blue curve is the same as the demand curve and is negatively sloped.

8. Average Revenue: Non-Collusive Oligopoly



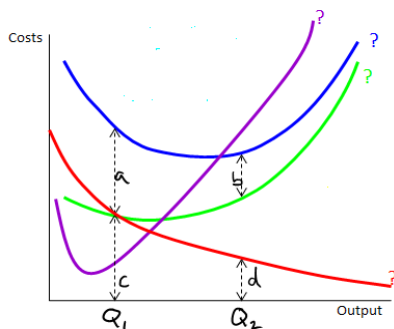
The green curve is relatively elastic at prices above  $P_{pm}$  and relatively inelastic at prices below  $P_{pm}$ .

9. Average Total Costs



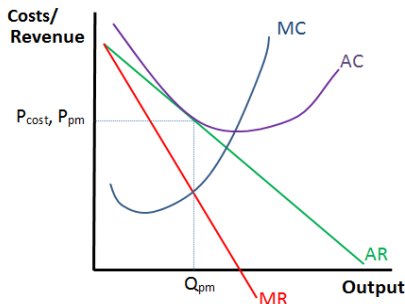
The blue line is the sum of the green and red lines.

10. Average Variable Costs



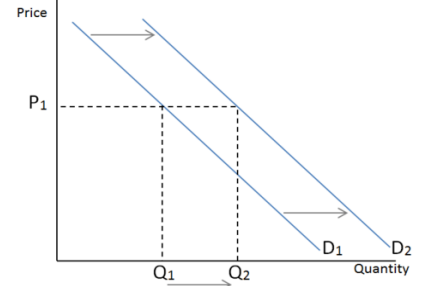
The green line decreases, then increases due to the law of eventually diminishing marginal returns. It gets closer to the blue line, but will never touch it.

11. Break-Even Profit



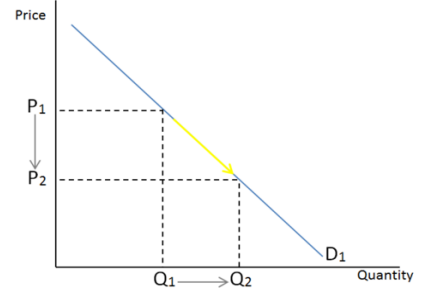
At  $Q_{pm}$ ,  $P_{pm} = P_{cost}$   
All costs are covered, with no extra

12. Change in Demand



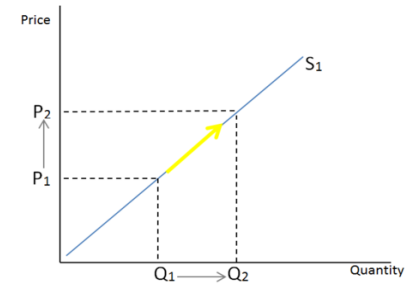
E.G. due to a new marketing campaign.

13. Change in Quantity Demanded



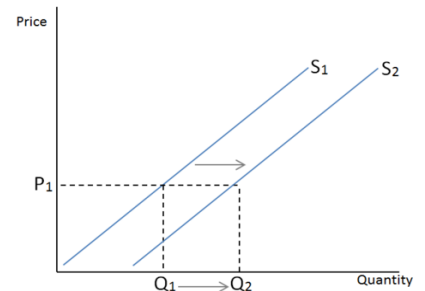
Due to a change in supply.

14. Change in Quantity Supplied



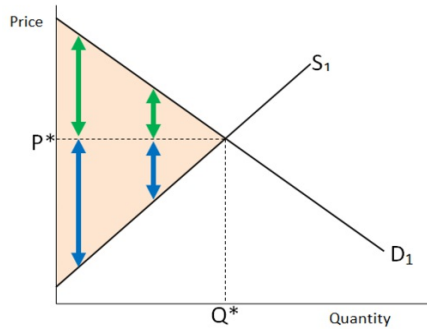
Due to a change in Demand.

15. Change in Supply



E.G. due to an improvement of technology

16. Community Surplus

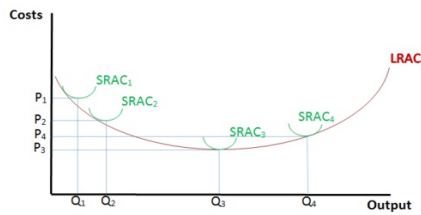


A concept which implies that at all quantities until  $Q$ , both producers and consumers are more than satisfied with the market price ( $P$ ).

17. Complement

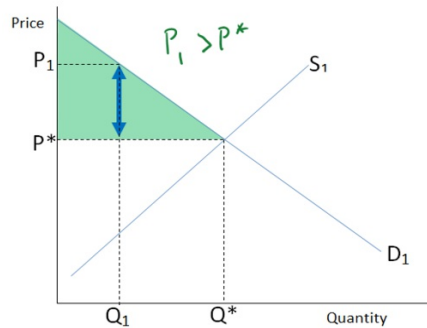


18. Constant Returns to Scale (LR)



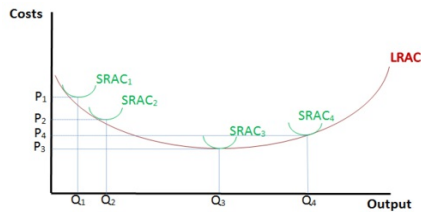
At  $Q_3$  further expansion does not lower costs.

19. Consumer Surplus



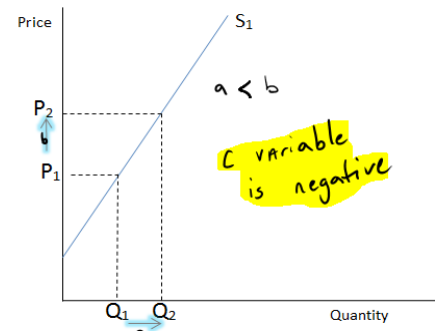
Instead of paying the higher price ( $P_1$ ), the consumer can pay the market price ( $P^*$ ). This is measured as additional utility for the good (the blue arrow).

20. Decreasing Returns to Scale (LR)



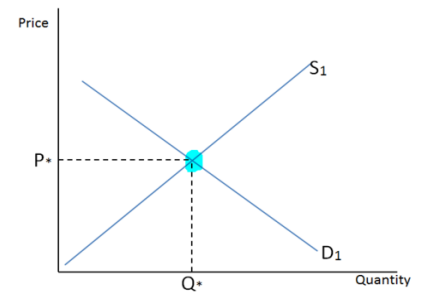
Movements along LRAC beyond  $Q_3$  result in higher costs

21. Elastic Supply



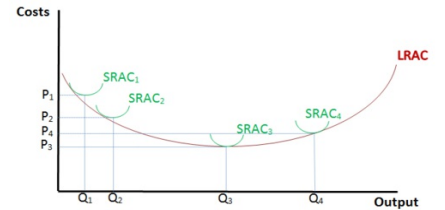
$$Q_s = -C + dP$$

22. Equilibrium



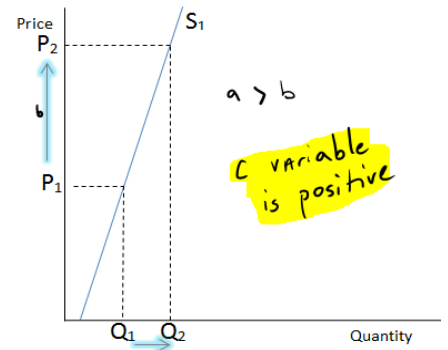
At  $P^*$ ,  $Q_s = Q_d$

23. Increasing Returns To Scale (LR)



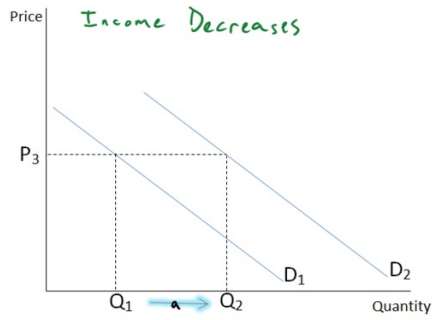
Movements along LRAC to  $Q_3$  result in lower costs

24. Inelastic Supply

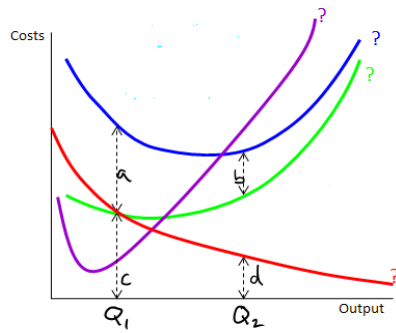


$$Q_s = +C + dP$$

25. Inferior Good

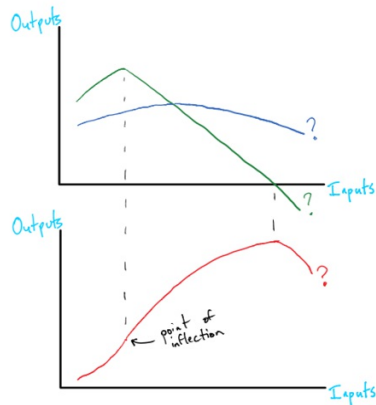


26. Marginal Costs



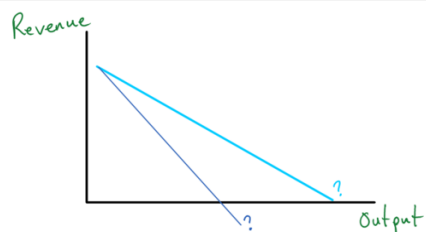
The purple line fall, then rises. It intersects the blue and green lines at their lowest points.

27. Marginal Product



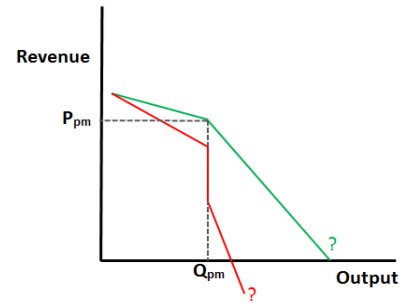
The green line intersects the highest point of the blue line, then intersects the X axis at the red line's highest point.

28. Marginal Revenue: Imperfect Competition



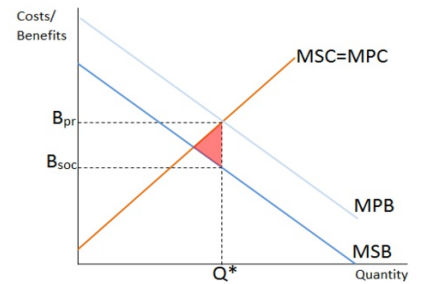
The dark blue curve is derived from the light blue curve and is twice as steep.

29. Marginal Revenue: Non-Collusive Oligopoly



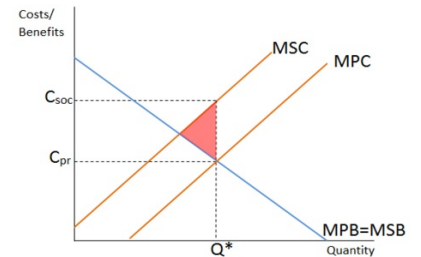
MC will always be found on the vertical section of the red curve.

30. Negative Externality of Consumption



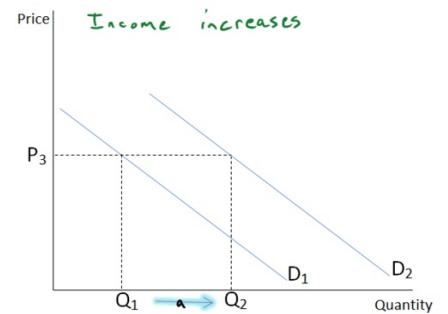
At  $Q^*$ , social benefits are less than private benefits

31. Negative Externality of Production



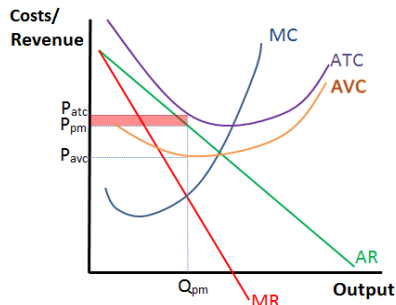
At  $Q^*$  social costs are greater than private costs

32. Normal Good



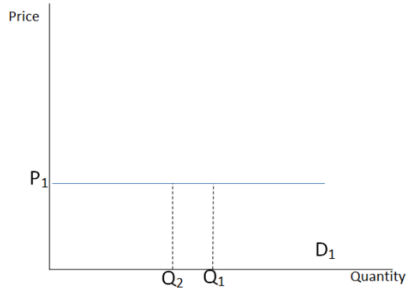
Can be classified as necessity or luxury

33. Operate at a Loss



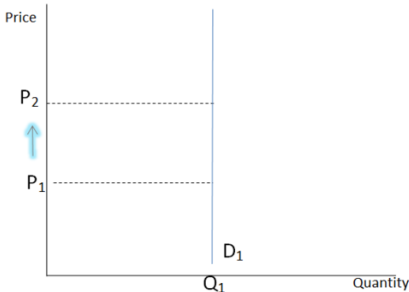
At  $Q_{pm}$ ,  $P_{avg} < P_{pm} < P_{atc}$   
Losses are minimized by producing

34. Perfectly Elastic Demand



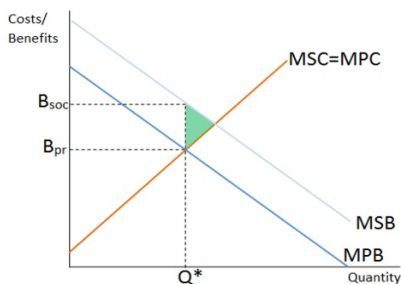
Quantity Demanded is infinite at  $P_1$ . Any increase in price would eliminate all demand.

35. Perfectly Inelastic Demand



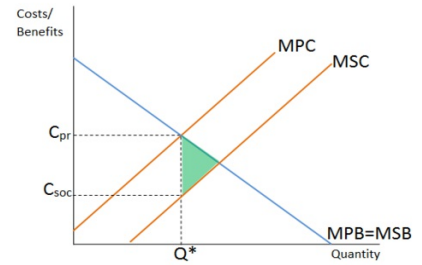
Any change in price would have no effect on D.

36. Positive Externality of Consumption



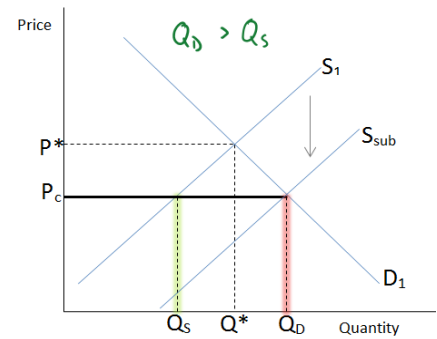
At  $Q^*$ , social benefits exceed private benefits

37. Positive Externality of Production



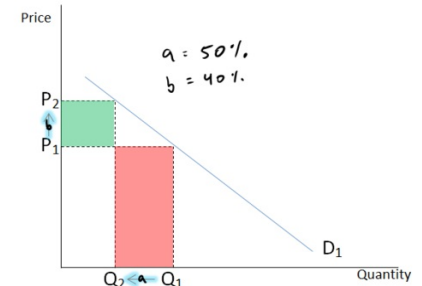
At  $Q^*$  social costs are less than private costs

38. Price Ceiling



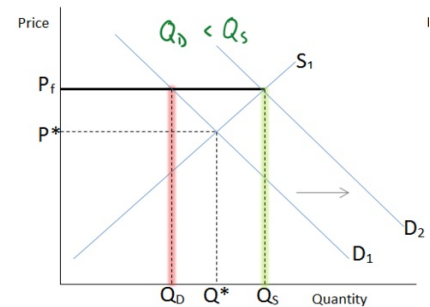
Since price cannot be raised beyond  $P_c$ , the government might subsidize the product to eliminate the scarcity (shown by an increase in supply from  $S_1$  to  $S_{sub}$ .)

39. Price Elastic Demand



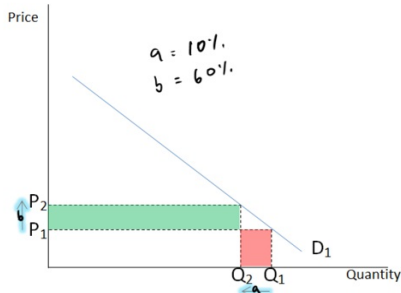
An increase in price reduces total revenue, and vice versa

40. Price Floor



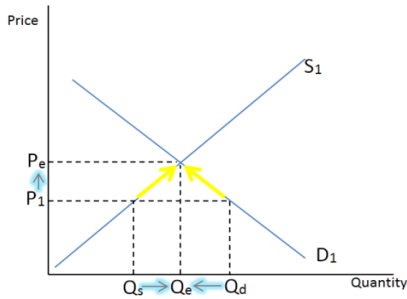
Since price cannot be lowered beyond  $P_f$ , the government might buy up the surplus (shown by an increase in demand from  $D_1$  to  $D_2$ .)

41. Price Inelastic Demand



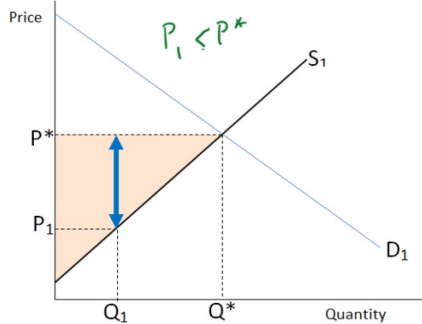
An increase in price reduces total revenue, and vice versa

42. Price Mechanism



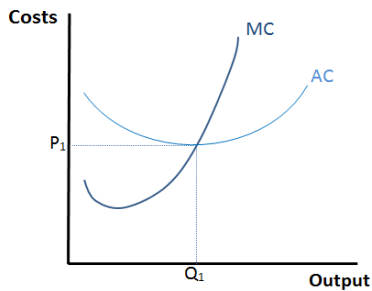
Disequilibrium in  $Q_s$  &  $Q_d$  cause price to move toward  $P_e$ , until the disequilibrium is eliminated

43. Producer Surplus



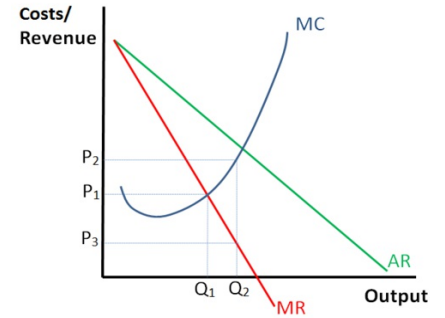
Instead of earning the lower price ( $P_1$ ), the producer can earn the market price ( $P^*$ ). This is measured as additional benefit derived from producing the good (the blue arrow).

44. Productive Efficiency



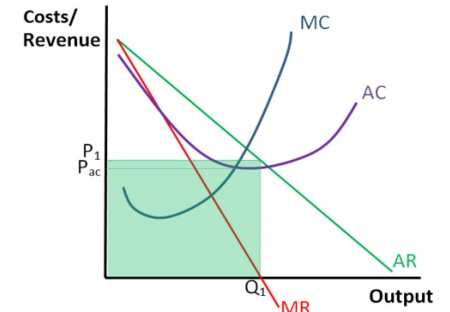
Where MC intersects AC, AC is minimized

45. Profit Maximisation



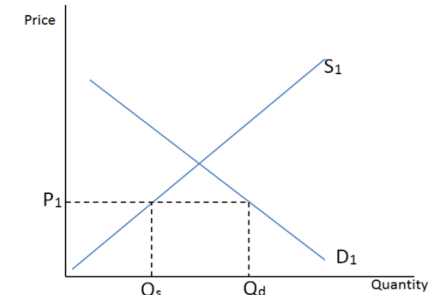
Beyond  $Q_1$ ,  $MC > MR$  so TR declines

46. Revenue Maximization



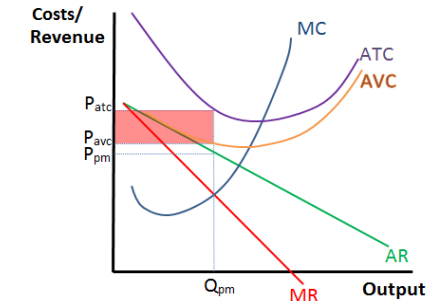
The firm produces until  $MR = 0$

47. Scarcity



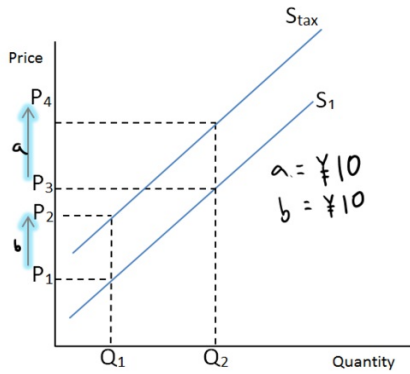
At  $P_1$ ,  $Q_s < Q_d$

48. Shutdown



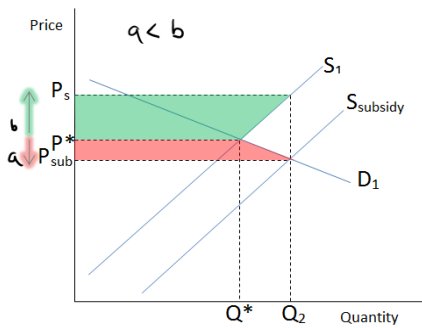
At  $Q_{pm}$ ,  $P_{avc} > P_{pm}$   
Losses are minimized by not producing

49. **Specific Tax**



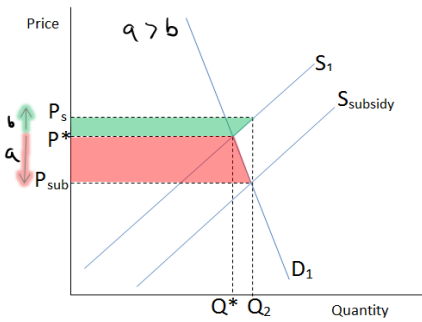
eg a toll charge or a fee

50. **Subsidy: Elastic Demand**



The consumers benefit less than producers. The subsidy produces a relatively high amount of additional units ( $Q_2 - Q^*$ ).

51. **Subsidy: Inelastic Demand**

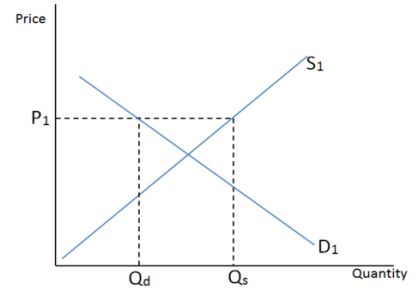


The consumers benefit more than producers. The subsidy is expensive when compared to the additional units produced ( $Q_2 - Q^*$ ).

52. **Substitute**

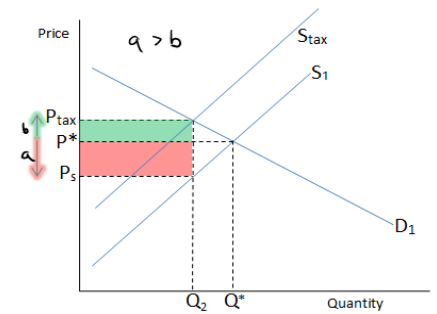


53. **Surplus**



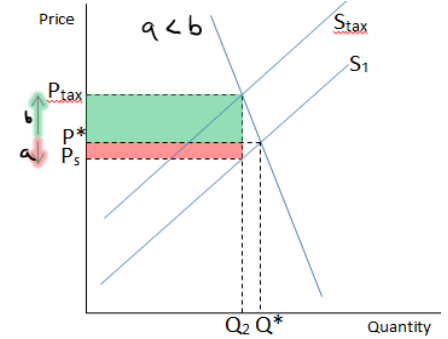
At  $P_1$ ,  $Q_s > Q_d$

54. **Tax incidence: Elastic Demand**



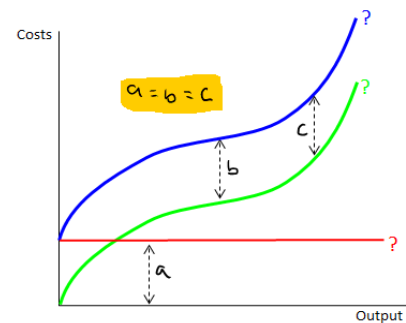
Producers bear more of the weight than the consumers. Tax revenue is lower.

55. **Tax Incidence: Inelastic Demand**



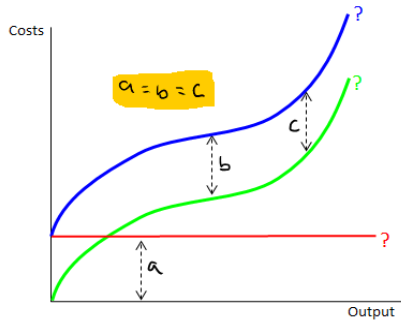
Consumers bear more of the weight than the producers. Tax revenue is higher.

56. **Total Costs**



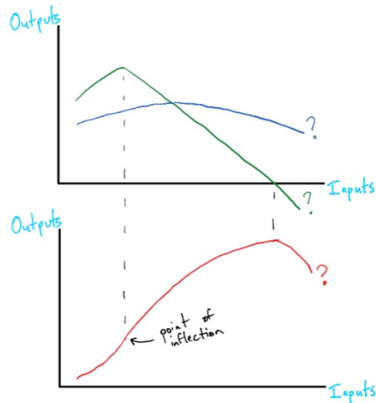
The blue line is produced by adding together the other two; it is a vertical translation of the green line.

57. Total Fixed Costs



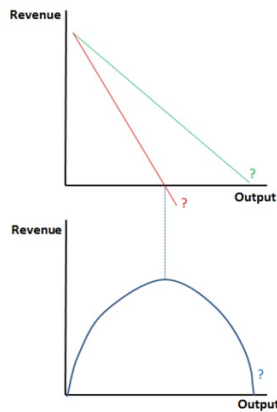
The red line stays the same. It is also represented by the space between the other two lines.

58. Total Product



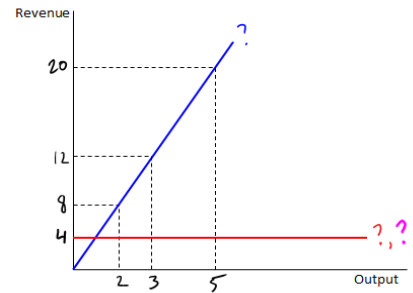
The red line increases at an increasing rate, then at a decreasing rate, then decreases

59. Total Revenue: Imperfect Competition



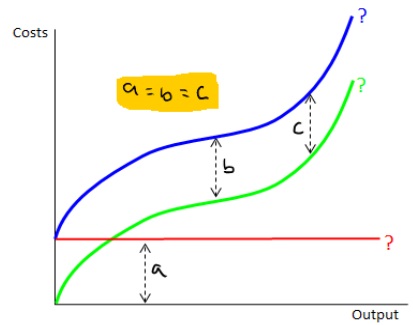
The blue curve is maximised when the red curve = 0

60. Total Revenue: Perfect Competition



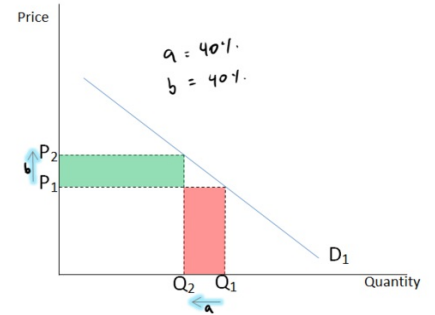
The blue line increases in a linear manner because the red line is horizontal.

61. Total Variable Costs



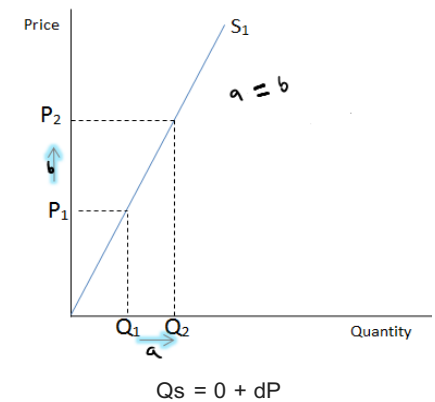
The green line becomes less steep, then more steep, due to the law of eventually diminishing marginal returns.

62. Unit Elastic Demand



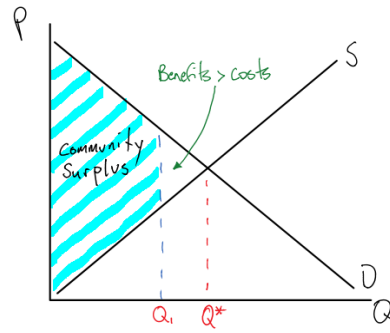
A change in price does not change total revenue

63. Unit Elastic Supply





64. Welfare loss (to society)



At quantities less than  $Q^*$ , benefits are greater than costs and should be produced.