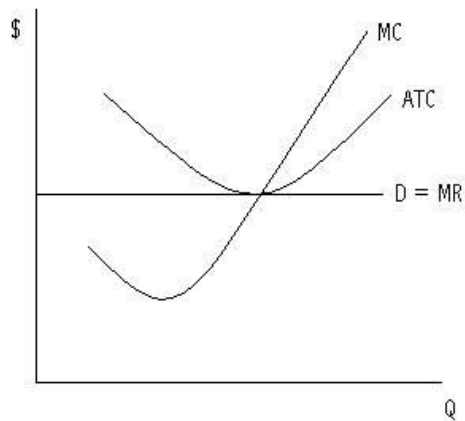
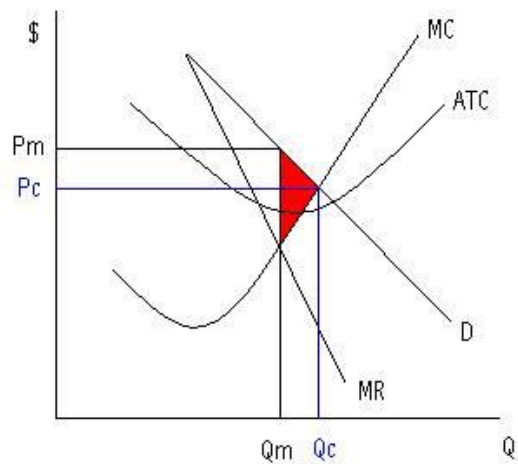


## AP Microeconomics Review

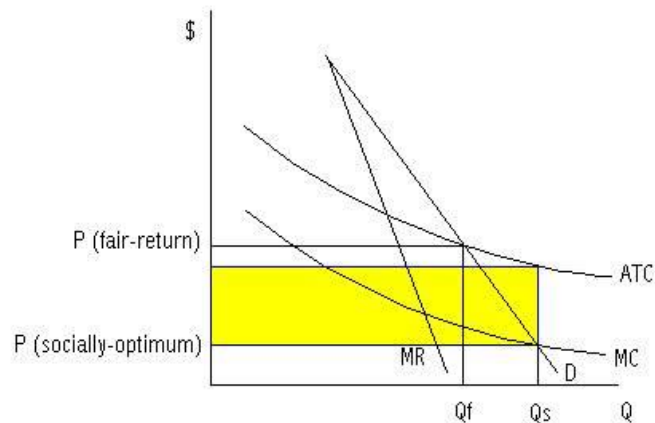
### 1. Firm in Perfect Competition (Long-Run Equilibrium)



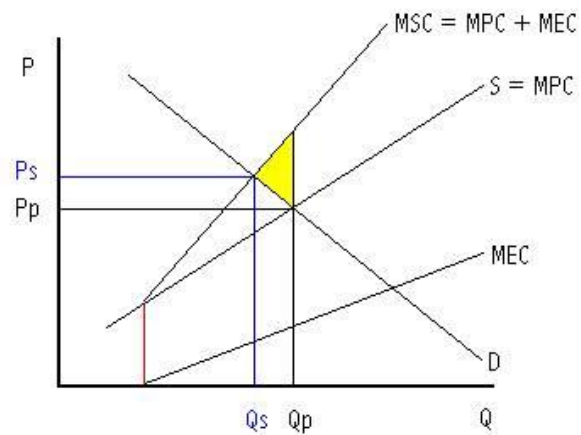
### 2. Monopoly Industry with comparison of price & output of a Perfectly Competitive Industry



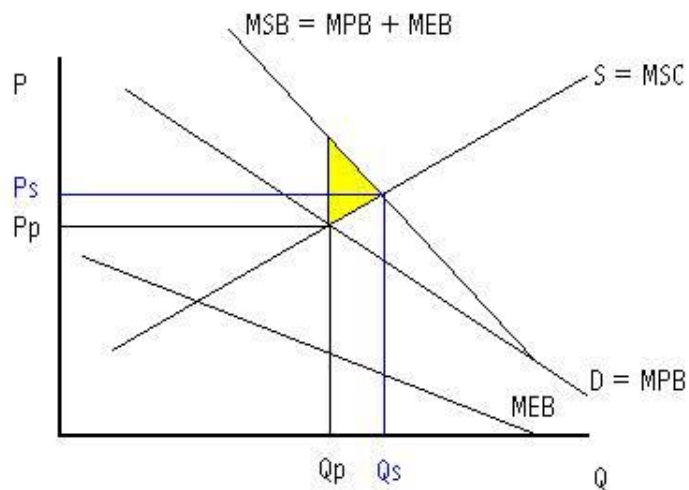
### 3. Natural Monopoly with Fair-Return and Socially-Optimum Regulation



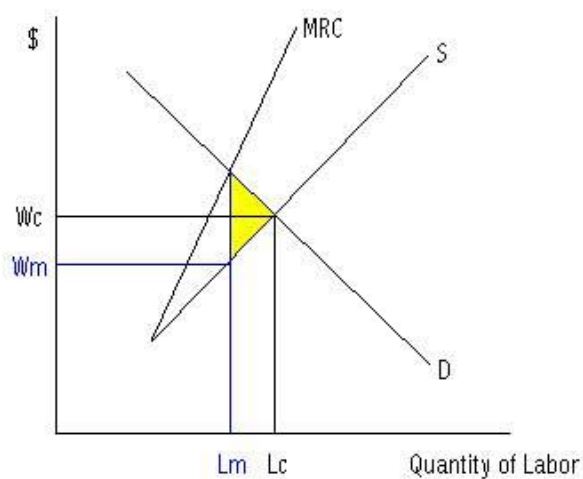
4. Negative Externality showing that too much is being produced at too low of a price



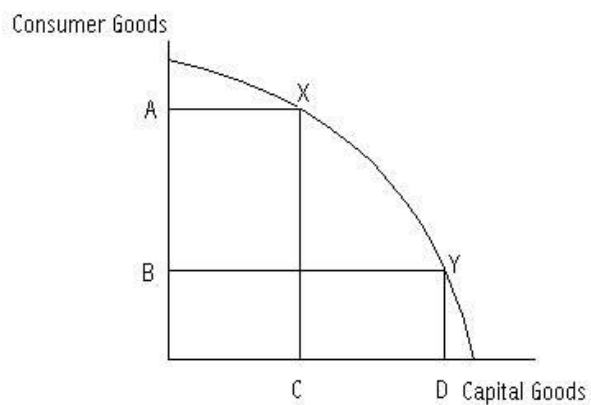
5. Positive externality showing that too little is being produced at too low of a price



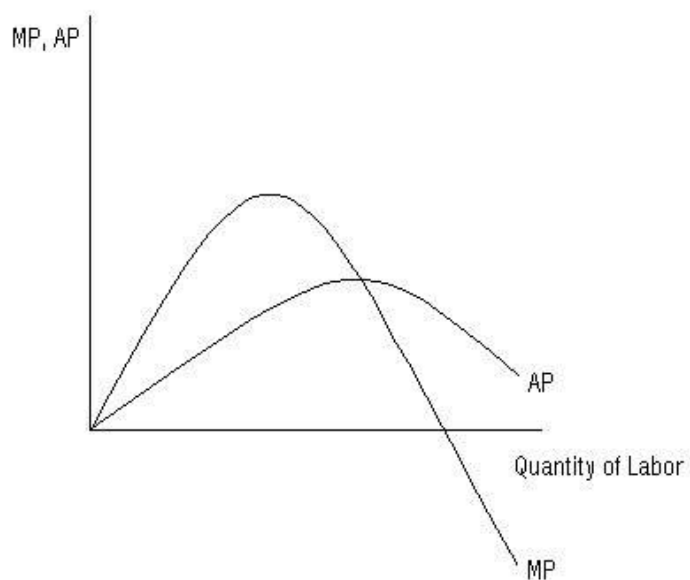
6. Monopsony Labor Market with comparison of workers hired and wage rate in a p.c. labor mkt.



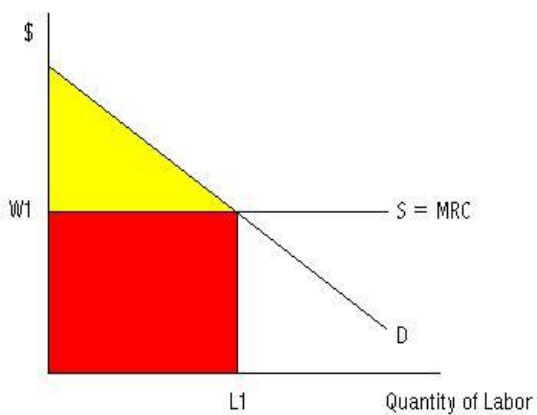
## 7. Production Possibilities Curve illustrating the concept of opportunity cost



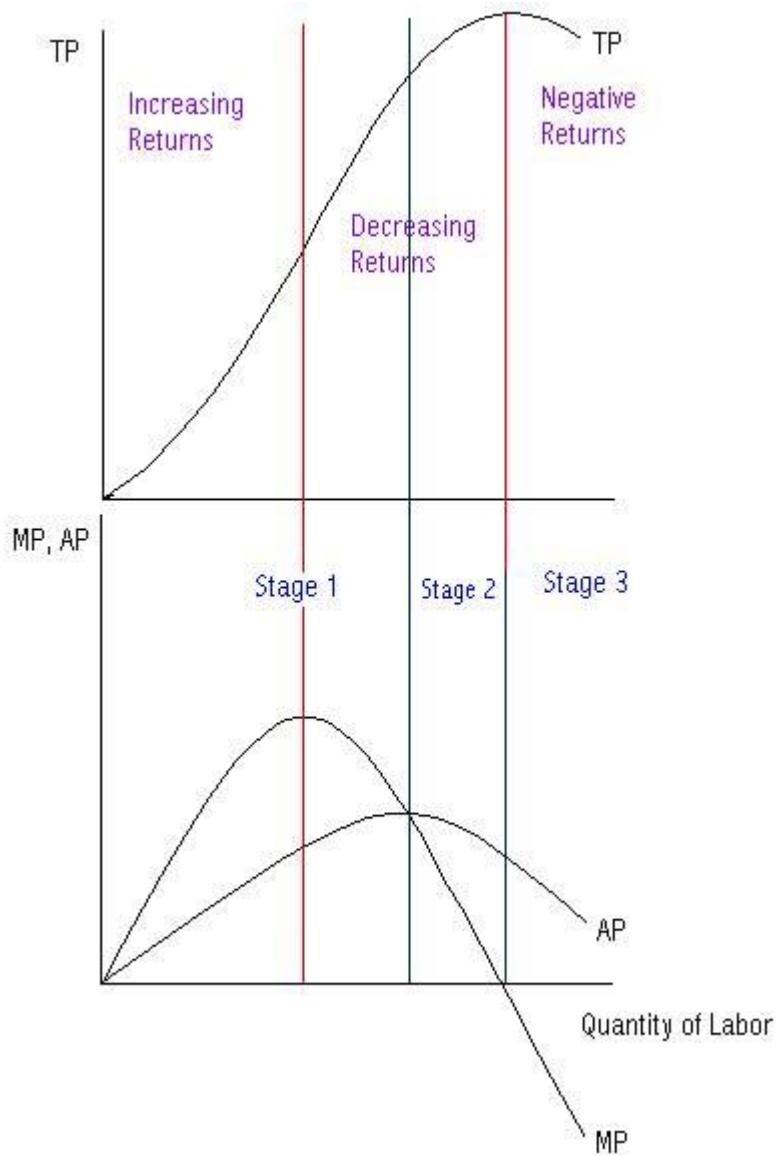
## 8. $MP_L$ and $AP_L$ (As long as the additional worker ( $MP_L$ ) is $>$ than the average, $AP_L$ is rising)



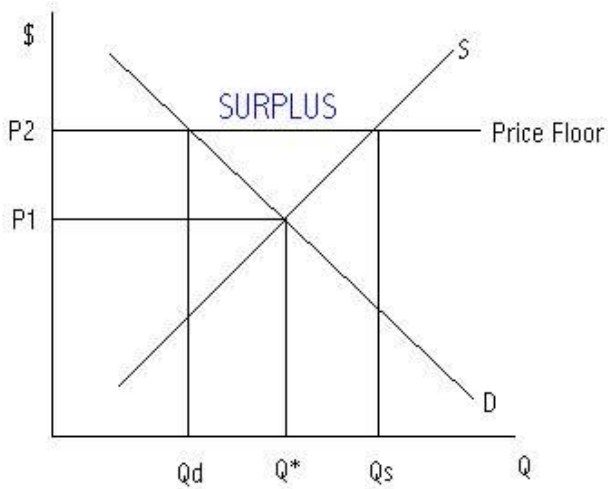
## 9. Perfectly Competitive Labor Market with Total Labor Costs in red and Non-labor Costs in yellow



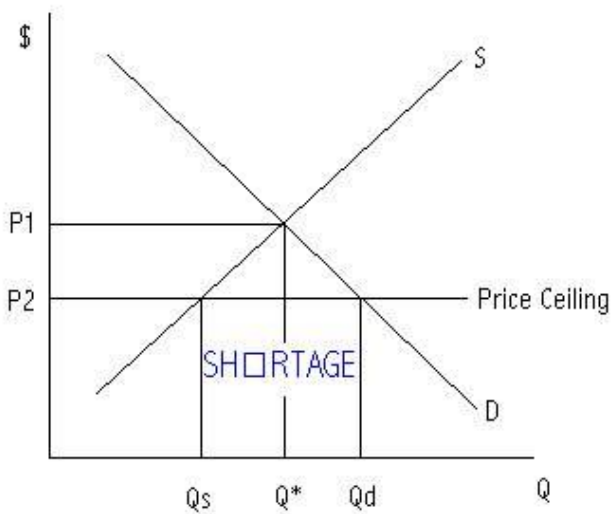
10. TP (Total Product) with MP and AP curves below to show the stages of production, return rates, and relationship between MP and TP (As long as  $MP > 0$ , TP is increasing)



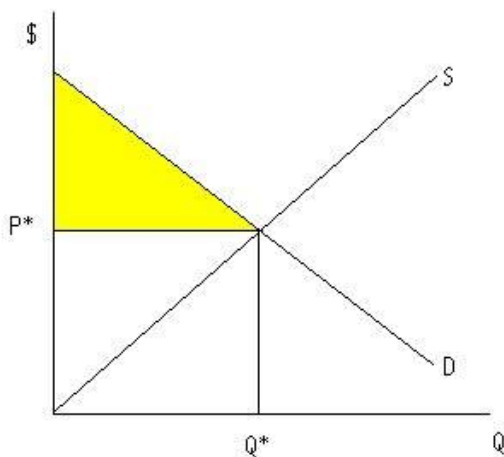
11. Illustration of an effective Price Floor creating a Surplus since  $Q_s > Q_d$



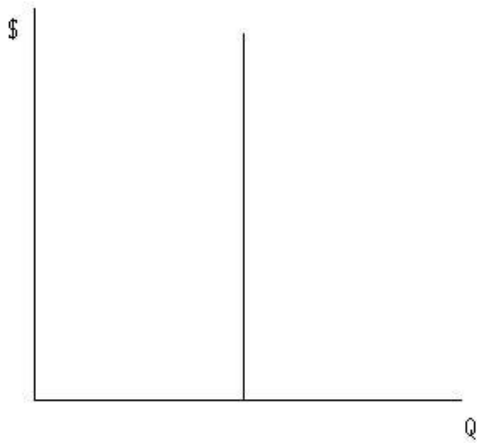
12. Illustration of an effective Price Ceiling creating a Shortage since  $Q_d > Q_s$



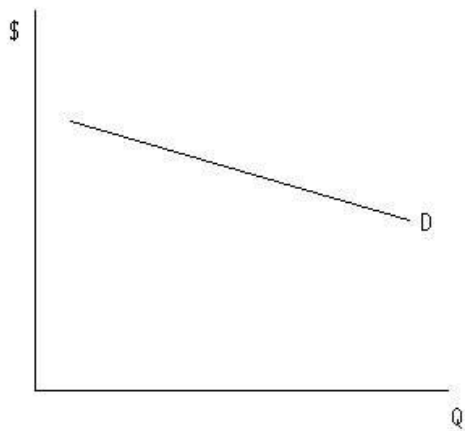
13. Market in equilibrium with Consumer surplus shaded in yellow



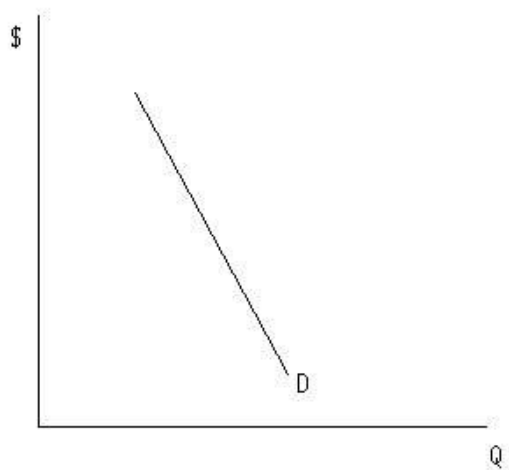
#### 14. Illustration of Perfectly Inelastic supply or demand



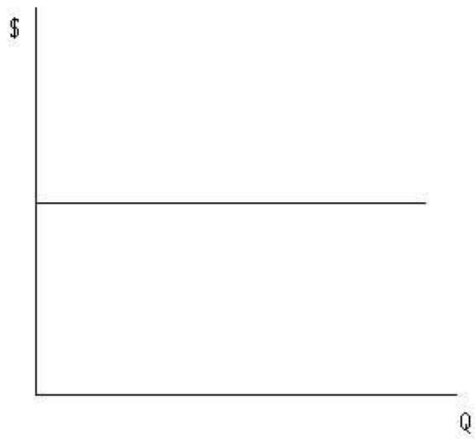
#### 15. Illustration of Elastic Demand



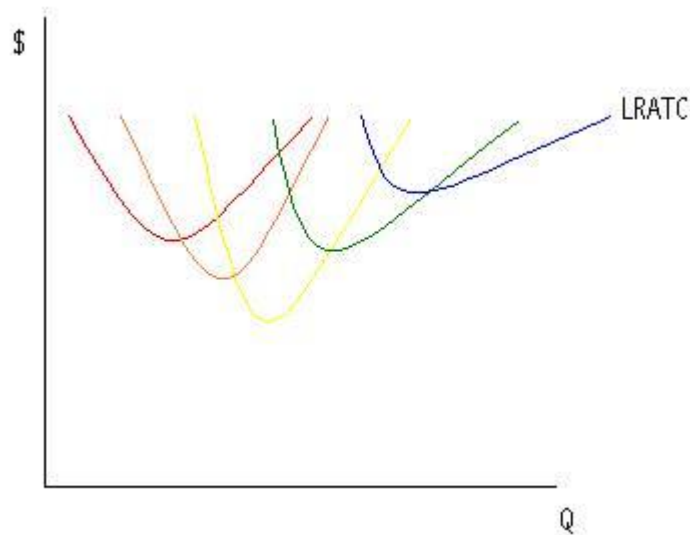
#### 16. Illustration of Inelastic Demand



17. Illustration of Perfectly Elastic supply or demand



18. Illustration of a Long-Run Average Total Cost Curve ( $\sum$  ATC curves for various plant sizes)



- 19.  $TFC + TVC = TC$
- 20.  $TFC / Q = AFC$
- 21.  $TVC / Q = AVC$
- 22.  $AFC + AVC = ATC$
- 23.  $TC / Q = ATC$
- 24.  $\Delta TC / \Delta Q = MC$
- 25.  $TR / Q = AR \text{ or } P$
- 26.  $\sum MP = TP \text{ (Output)}$

27.  $P \times Q = TR$
28.  $\Delta TR / \Delta Q = MR$
29.  $\Delta TP / \Delta L = MP_L$
30.  $TP / L = AP_L$
31.  $AR < AVC$  : Shutdown
32.  $\% \Delta QD / \% \Delta P = E_d$  (Elasticity of Demand) Coefficient
33.  $P = ATC$  : Fair-Return Regulation (0 Economic Profit or Normal Profit)
34.  $P = MC$  : Socially-Optimum Price Regulation (Allocative Efficiency)
35.  $P > MC$  : Underallocation of Resources
36.  $P < MC$  : Overallocation of Resources
37.  $MU_A / P_A = MU_B / P_B$  : Equimarginal Rule (Utility Maximization Rule)
38.  $MP_A / P_A = MP_B / P_B$  : Least-Cost Rule
39.  $MR = MC$  : Optimal Output Rule
40.  $MRP = MRC$  : Hiring Rule
41.  $MP \times P =$  Marginal Revenue Product (MRP)
42.  $MRP_A / P_A = MRP_B / P_B = 1$  : Profit-Maximization Rule
43.  $TR - TC =$  Profit
44.  $P > ATC$  : Economic Profit
45.  $P < ATC$  : Economic Loss
46.  $MR < 0$  : Demand is inelastic (TR is declining)
47.  $MR > 0$  : Demand is elastic (TR is rising)
48.  $MR = 0$  : Demand is unit elastic (TR is at a maximum)
49.  $\Delta TR / \Delta \text{Input} =$  Marginal Revenue Product (MRP)
50.  $\Delta TC / \Delta \text{Input} =$  Marginal Resource Cost (MRC)



- 51.  $P = \text{Min ATC}$  : Productive Efficiency
- 52.  $e_d < 1$  : Demand is inelastic
- 53.  $e_d > 1$  : Demand is elastic
- 54.  $e_d = 1$  : Demand is unit elastic
- 55.  $\Delta \text{ Price}$  = Movement Along the Curve
- 56.  $\Delta \text{ Non-Price Determinant}$  = Shift of the Curve
- 57.  $P$  Increases,  $TR$  increases : Demand is inelastic
- 58.  $P$  increases,  $TR$  decreases : Demand is elastic
- 59.  $P$  decreases,  $TR$  decreases : Demand is inelastic
- 60.  $P$  decreases,  $TR$  increases : Demand is elastic

### ADDITIONAL THINGS YOU SHOULD KNOW!

- 1. Ways for the government to correct positive externalities.
- 2. Ways for the government to correct negative externalities.
- 3. Justification for government regulation of a monopoly.
- 4. Definition of inferior goods.
- 5. Definition of normal goods.
- 6. Assumptions of the PPC (Production Possibilities Curve).
- 7. What would cause the PPC to shift inward and outward.
- 8. Adam Smith's view on the nature of the economy and economic growth.
- 9. Fair-Return vs. Socially-Optimum Return (Which one might require a payment of a subsidy to the firm?).
- 10. Characteristics of elastic and inelastic goods (elastic, inelastic, perfectly elastic, perfectly inelastic).
- 11. Economic Roles of the government.
- 12. What are variable costs?

13. Derived Demand.
14. Determinants of Resource Demand.
15. Determinants of Supply and Demand.
16. Definition of Marginal Resource Cost, Marginal Revenue Product, Marginal Revenue, and Marginal cost (in words).
17. How to apply the Least-Cost Rule.
18. What to do when facing a surplus or shortage in order to clear the market (to reach equilibrium).
19. Definition of Price Discrimination.
20. Concepts involving the Production Possibilities Curve.
21. What would cause a firm's short run cost curves (MC, AVC, and ATC) to shift?
22. Definition of Diminishing Marginal Returns and the point at which it occurs.
23. Definition/Characteristics of Perfect Competition, Monopolistic Competition, Oligopoly, Monopoly, and Monopsony.
24. Why is a monopolistically competitive firm allocatively inefficient in the long run?
25. How to apply the Total Revenue Test.
26. What can happen during the short run?
27. Nominal Wages vs. Real Wages.
28. What are the factor payments for land, labor, Capital, and Entrepreneurship?
29. Definition of Free-Rider and how it applies to public goods.
30. Characteristics of Natural Monopolies.
31. What are some barriers to entry?
32. Why do long run average total costs eventually rise as a firm grows larger?
33. Explain the relationship between Demand and Marginal Revenue for a Monopoly.
34. Allocative and Productive Efficiency in the various market structures.
35. Entry and Exit into various market structures in the long run.

36. Graphical representations of Perfect Competition, Monopoly, Purely Competitive Labor Market, and Monopsony.
37. How to properly label economic graphs!