ECON 102 (Inoue) – Final (Review of Exams 1,2, & 3) – Practice Exam Solutions

1. C – The study of how people make choices. Answer B is incorrect because wants are considered to be unlimited.
2. D – Everyone faces scarcity because wants are considered to be unlimited.
3. D – Nothing changes other than the factor or factors being studied.
4. B – The extra cost associated with an extra unit of activity because marginal means extra or incremental.
5. D – Scarcity exists because society cannot fulfill all human wants.
6. D – Giving up the experience you would have gained during the internship you would have actually chosen. Opportunity cost is the value of the <u>next-best</u> alternative.
7. C – The PPC will be bowed if resources are specialized.
8. B – Is an inefficient point.
9. A – Is why the PPC is generally bowed.
10. D – Individuals are able to produce <u>more</u> when they specialize which increases productivity for both individuals and society.
11. A – Answers B and C are definitions of absolute advantage.
12. A – We see specialization occur in society because different individuals experience different costs when engaging in the same activities.
13. B – Have an inverse relationship.
14. D – If the relative price of a good decreases, consumer will demand more of the good.
15. D – Means that there was a change in one of the ceteris paribus conditions. C is incorrect because the fact that a good is a normal good alone does not mean the demand curve would shift. A change income levels would cause the demand curve to shift.
16. C – Gatorade and Powerade are substitutes.
17. B – Buy more whiskey now. This problem is related to the material on expectations of future prices.
18. A – The only thing that will cause a change in the quantity demanded is a change in the goods own price.
19. C – The increase in the cost of plastic is an increase in the cost of an input for the supplier. An increase in the cost of an input will cause an inward shift of the supply curve.
20. B – Although you may personally disagree, we know Schlitz is an inferior good in this problem because we choose to consume less of it as our income rises.

21. A – To solve this problem we will want to find the point where $Q_D = Q_S$

    $230 - 5P = 20 + 2P$

    $210 = 7P$

    $P = 30$

    The price of $30 is the equilibrium price because it is the price where supply and demand are equal. By definition at a price of $30 Q_D and Q_S will be equal. So we can plug $30 into either the Q_D or the Q_S equation to find the equilibrium quantity. Additionally if you want to check you did this problem correctly you can plus $30 into both equations to ensure $30 is the equilibrium price.

    $Q_D = 230 - 5(30) = 80$

    $Q_S = 20 + 2(30) = 80$

22. C – Price is undeterminable, Quantity will increase. See this section in the review packet.
23. D – Movement along the supply curve.
24. C – The point where the supply and demand curves intersect.
25. D – "Other things constant"
26. D – The only thing that would cause both the equilibrium price and quantity to decrease would be for the demand curve to shift inward to the left.
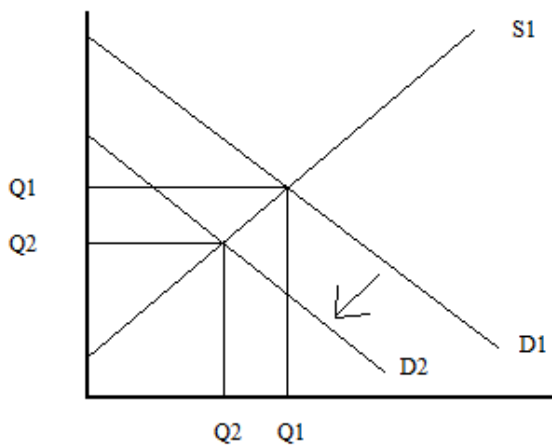
27. C – Thinking that association is causation because the third string doesn't cause the team to win. The third string gets to play when the team already has a huge lead and is pretty much guaranteed to win.
28. D – Comparative advantage because your friend be better if he specialized where he had a comparative advantage and then traded with others who had comparative advantages in other areas.

29. D – A shortage of 60 units because at a price of $50 demand is 80 units while supply is only 20 units.
30. B – The price of the good will rise because excess demand is the same thing as saying there is a shortage.
31. D – The tax placed on the good that is paid by the seller because this will cause the supply curve to shift, not the demand curve.
32. A – The price of the good will fall as quantity demanded increases and quantity supplied decreases.
33. A – Suppliers will tend to discriminate more because the quantity demand will exceed the quantity supplied. Since suppliers are not able to raise price, they will pick who they want to sell their goods to which gives them the option to discriminate against certain groups of people. We see this exemplified with rent control where landlords would discriminate against poor people in favor of wealth people because wealthy people are more reliable tenants.
34. A – A shortage is caused by a binding price ceiling.
35. C – If the band played bigger venues, it would increase revenue because it could sell more tickets.
36. B – Sunk costs are non-recoverable and should not impact decision-making.
37. A – Actions should be continued while their MB > MC. When MB > MC, doing more of the action will lead to a greater total benefit. When MB < MC, each additional action loses more benefit than it adds. When an action is done at the level where MB = MC, no additional benefit is left on the table.
38. C – Inverse relationship
39. A – See ranges in packet section on Ch. 5
40. D – $560

$MC_4 = TC_4 - TC_3$
$MC_4 = \$800 - \$240$
$MC_4 = \$560$

41. A – $80

$ATC_3 = TC_3 / 3$
$ATC_3 = \$240 / 3$
$ATC_3 = \$80$

42. C – When diminishing marginal product begins

43. E – The firm is able to increase profit by producing one unit less

   In perfect comp, P = MR

   So, we know that at the current level of production MR < MC

   The firm will want to decrease the number of units it is producing until it reaches the point where MR = MC. Decreasing production by one unit will increase profit as long as MR < MC. The firm will want to continue decreasing production until MR = MC; however, reducing production by even one unit will increase profit.

44. C – Firms will exit the market, and the market price will increase. Firms are earning negative economic profit because P < ATC; however, the firms are earning enough to continue to operate in the short run because P > AVC. The negative economic profit will cause firms to exit the market over the long run. The market price will increase as firms exit the market. Eventually the market will reach the point where P = ATC when it reaches long run equilibrium and firms are earning zero economic profit.

45. B – A strategy that always produces a better outcome than the alternatives

46. B – The difference between the amount an individual is willing to pay for a good and what the individual actually has to pay for the good.

47. A – Cooperate first, then always mirror opponent

48.

	TC	TVC	TFC	ATC	AVC	AFC	MC
0	100	0	100	-	-	-	-
1	110	10	100	110	10	100	10
2	130	30	100	65	15	50	20
3	160	60	100	53.3	20	33.3	30
4	220	120	100	55	30	25	60
5	300	200	100	60	40	20	80

When Q=2:
TVC = TC – TFC = 130 – 100 = 30
TFC = 100
*TFC will be 100 in all rows because fixed costs stay constant by definition
ATC = TC / Q = 130 / 2 = 65
AVC = TVC / Q = 30 / 2 = 15
AFC = TFC / Q = 100 / 2 = 50
MC = Change in TC = 130 – 110 = 20

When Q=3:
TC = TVC + TFC = 60 + 100 = 160
TFC = 100
ATC = TC / Q = 160 / 3 = 53.3
AVC = TVC / Q = 60 / 3 = 20
AFC = TFC / Q = 100 / 3 = 33.3
MC = Change in TC = 160 – 130 = 30

When Q=4:
TVC = MC when Q=4 + TVC when Q=3 = 60 + 60 = 120
TC = TVC + TFC = 120 + 100 = 220
TFC = 100
ATC = TC / Q = 220 / 4 = 55
AVC = TVC / Q = 120 / 4 = 30
AFC = TFC / Q = 100 / 4 = 25

When Q=5:
TVC = AVC x Q = 40 x 5 = 200
TC = TVC + TFC = 200 + 100 = 300
TFC = 100
ATC = TC / Q = 300 / 5 = 60
AFC = TFC / Q = 100 / 5 = 20
MC = Change in TC = 300 – 220 = 80

49. B – Too little of the quantity of the good will be produced

P

Positive externality
is taken into account

S1

Postive externality not
taken into account

D2 - Includes both private
and social benefits

D1 - Only includes private
benefit (demand does not
take the positive externality
into account)

Positive
externality not
taken into
account

Positive
externality is
taken into
account

Q
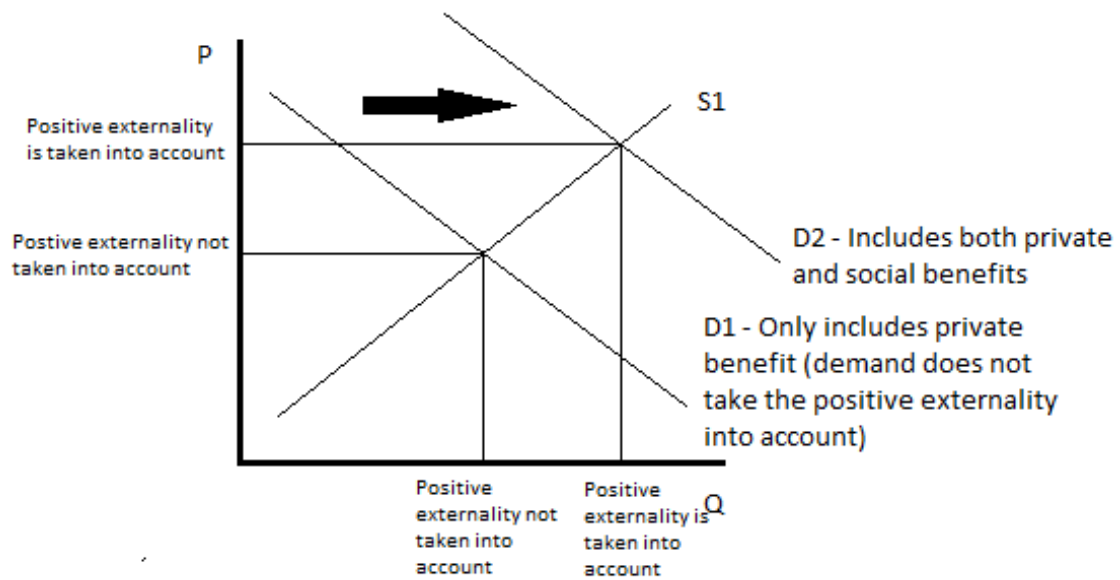
50. D – Fireworks because they can be enjoyed by everyone at the same time, and it is not possible to prevent people from enjoying them.

51. E – A toll road is non-rival because many people can use it at the same time; however, it is excludable because you must pay to use the toll road.

52. B – Adverse selection

53. A – They will produce less and charge a higher price
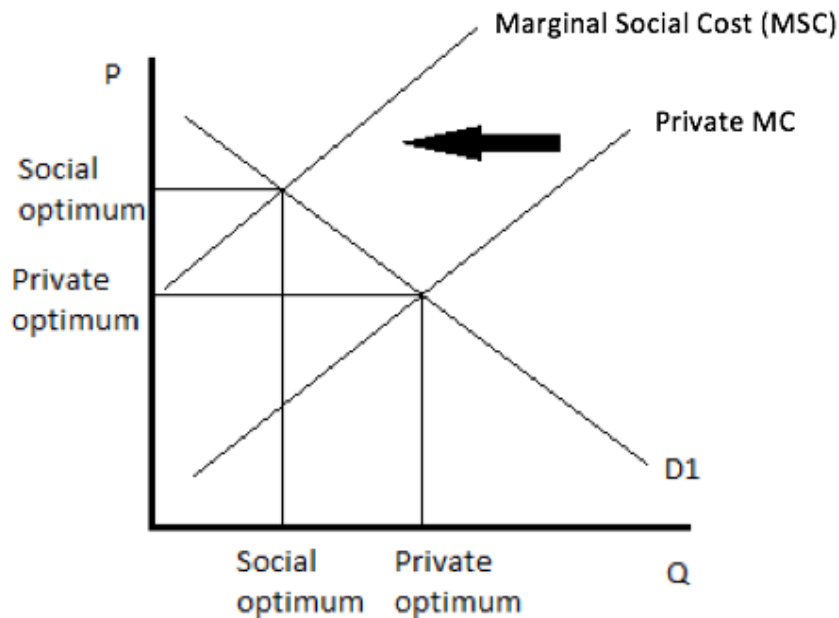
54. C – Only sick people buy insurance

55. D – Third parties cost money, hassle, and time

56. D – Additional satisfaction gained from consuming one more unit of a good.

57. A – Total satisfaction gained from all units of a good

58. C – You can tell he began to experience negative marginal utility because he ate so much that his total utility started to decrease when he got sick.

59. C – The marginal utility of good A divided by the price of good A should equal the marginal utility of good B divided by the price of good B.

60. A – We should buy more of good X and less of good Y

Bang for the buck X = 4 / $10 = 0.4 utils per dollar spent

Bang for the buck Y = 5 / $25 = 0.2 utils per dollar spent

61. D – We should keep our spending the way it is.

   Bang for the buck X = 150 / $75 = 2 utils per dollar

   Bang for the buck Y = 250 / $125 = 2 utils per dollar

62. C – 2 Gatorades and 3 ice creams

Bang for the buck of 1st Gatorade = 40/4 = 10   Bang for the buck of 1st ice cream = 60/2 = 30

Bang for the buck of 1st Gatorade = 40/4 = 10   Bang for the buck of 2nd ice cream = 40/2 = 20

Bang for the buck of 1st Gatorade = 40/4 = 10   Bang for the buck of 3rd ice cream = 24/2 = 12

Bang for the buck of 1st Gatorade = 40/4 = 10   Bang for the buck of 4th ice cream = 8/2 = 4

Bang for the buck of 2nd Gatorade = 32/4 = 8   Bang for the buck of 4th ice cream = 8/2 = 4

* Since Gatorade costs $4 and ice cream costs $2 we have used our full $14 budget at this point

63. C – Probability ranges between 0-1. A probability greater than 1 is impossible.

64. D – Employees and individuals pay for many costs out of pocket and also pay for insurance, but insurance companies pay for the majority of the care itself. While the government pays for the VA, Medicare, and Medicaid (totaling more cost per capita of Americans than most other countries pay for universal healthcare), it does not pay the majority of costs

65. A – Other answers: B – Copay, C – Coinsurance, D – Deductible

66. D – Other answers: A – Premium, B – Copay, C – Coinsurance

67. A – You have more information about the condition of the car than the insurance company

68. B – She is unlikely to do this, however. The Ultimatum Game is the same as the Dictator game except the second party gets to respond. She is unlikely to do this, however

69. A – Rational in long term but not short term

70. D – Hot hand Fallacy: mistaken belief things happened a lot in recent past are more likely to happen

71. C – Gambler's Fallacy: mistaken belief things happened a lot in recent past are more likely to happen

72. D – Ratio of part A to part B of the Lorenz Curve showing a country's level of inequality

73. C – This is the highest GINI Coefficient. D cannot be a real GINI Coefficient

74. A – Less desirable or dangerous work may be paid relatively more

75. D – Few make a lot; many make little in these fields

76. D – Teaching is a traditionally female career, while accounting is traditionally male. Overt discrimination may not be an issue anymore, but traditionally female occupations tend to pay less because they always have.

77. B – The flatter the curve, the closer it is to the line of equality

78. A – 150 / 250 = .6

1. **$2 per hour**

   Riding your bike will take you 10 hours each way. So riding your bike will take you a total of 20 hours. Taking the bus will take 2.5 hours each way. So taking the bus will take you a total of 5 hours.

   Time saved on the bus = 20 hours – 5 hours = 15 hours

   Additional cost of bus = $40 – $10 = $30

   This means you can spend an additional $30 to save yourself 15 hours. You now need to divide the cost savings by the number hours you saved to find the rate at which you would need to value your time to make you indifferent between biking or taking the bus.

   $30 / 15 hours = $2 per hour

   This means that if you value your time at $2 an hour, you are indifferent between biking and taking the bus. If you value your time at more than $2 an hour, you should take the bus. If you value your time at less than $2 an hour, you should ride your bike.

2. **Opportunity cost of moving from point C to D = 80 sticks of butter**

   Make sure that you read this question carefully. We are moving from point C to point B. This means that we will need to give up 80 sticks of to produce 60 more guns. Since we are giving up 80 sticks of butter to move from point C to point B, the opportunity cost of the move is 80 sticks of butter.

   Note that if the question had asked what the opportunity cost of moving form point B to point C was, the answer would have been 60 guns because you are giving up making 60 guns to move from B to C. It is important to pay attention to which way you are moving along the PPC.

   Inefficient point = Point E

   Unattainable point = Point F

3. **A change in any of these factors will shift the <u>demand</u> curve –** Income, taste and preferences, prices of related goods, consumer's expectations of future prices and incomes, and the market size

   A change in any of these factors will shift the <u>supply</u> curve – Prices of resources and inputs used to produce products, technology and productivity, taxes and subsidies, producer's price expectations, the number of firms in the industry

4. Jim, because it takes Jim less time to make a sale than Dwight.

5. Jim, because it takes Jim less time to manage an employee than Dwight.

6. Jim must give up 1 sale to manage 1 employee.

   Jim's cost in sales of managing employees = Time managing and employee / Time spent making a sale
   Jim's cost in sales of managing employees = 15 min / 15 min = 1 sale

7. Jim must give up managing 1 employee to make 1 sale.

   Jim's cost in managing employees of sales = Time spent making a sale / Time managing an employee
   Jim's cost in managing employees of sales = 15 min / 15 min = 1 employee managed

8. Dwight must give up 2 sales to manage 1 employee.

   Dwight's cost in sales of managing = Time managing and employee / Time spent making a sale
   Dwight's cost in sales of managing = 60 min / 30 min = 2 sales

9. Dwight must give up managing 0.5 employees to make 1 sale.

   Dwight's cost in managing of sales = Time spent making a sale / Time managing an employee
   Jim's cost in managing of sales = 30 min / 60 min = 0.5 employees managed

10. Jim, because Jim has to give up 1 sale to manage 1 employee, but Dwight must give up 2 sales to manage 1 employee.

11. Dwight, because Dwight has to give up managing 0.5 employees to make 1 sale, but Jim must give up managing 1 employee to make 1 sale.

12.

   a)   Tax amount = $45 - $25 = $20

   b)   Consumer incidence = ($45 - $30) / $20 = 0.75 = 75%

   c)   Producer incidence = ($30 - $25) / $20 = 0.25 = 25%

   d)   Tax revenue = ($45 - $25)(80) = $1,600

   e)   DWL = (1/2)($45 - $25)(100 - 80) = 200

   f)   CS before tax = (1/2)(100)($100 - $30) = 3,500

   g)   CS after tax = (1/2)(80)($100 - $45) = 2,200

   h)   PS before tax = (1/2)(100)($30) = 1,500

   i)   PS after tax = (1/2)(80)($25) = 1,000

13. 56

We need to set MR = MC. To find MR, we need to double the slope of the demand equation.

P = 6,000 – 50Q

MR = 6,000 – (2)50Q
MR = 6,000 – 100Q

MC = $400

MR = MC
6,000 – 100Q = 400
5600 = 100Q
Q = 56

14. $3,200

P = 6,000 − 50Q
P = 6,0000 − 50(56)
P = 3,200

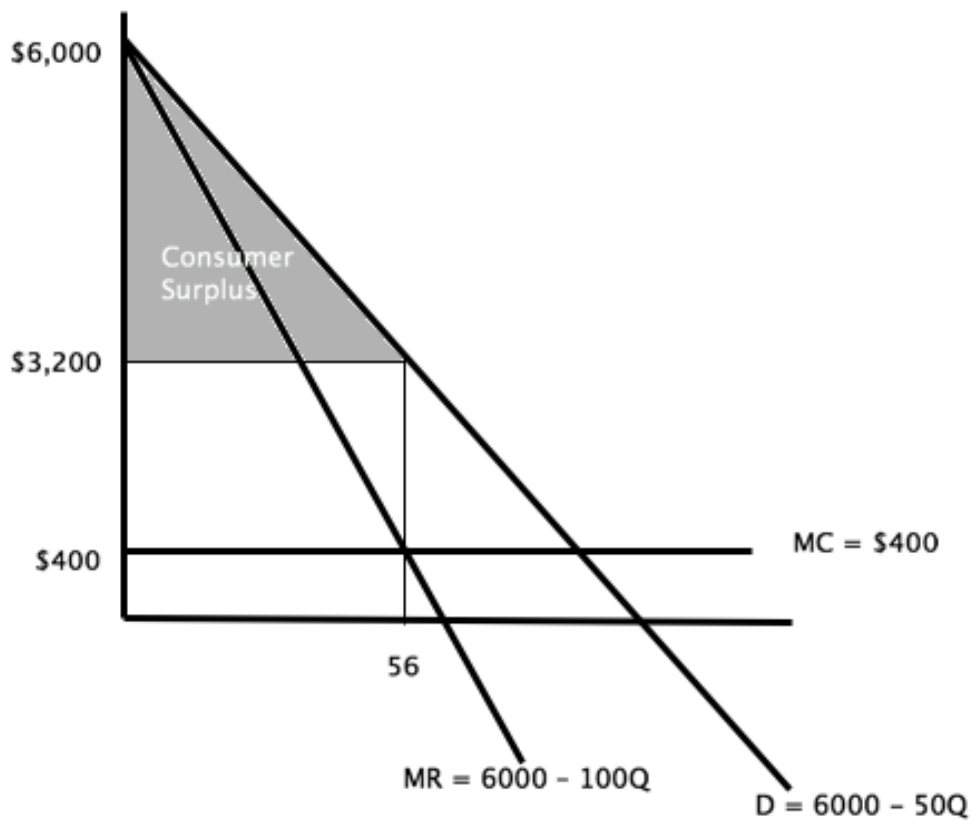15. $156,8000

Profit = (Price − MC)(Q) − FC
Profit = ($3,200 − $400)(56) − $0
Profit = $156,800

16. 78,400

CS is the area below the demand curve but above the equilibrium price.

CS = (1/2)(56)(6,000 − 3,200)
CS = 78,400

17. $400. In a perfectly competitive market, P = MC.

18. 112

   P = MC
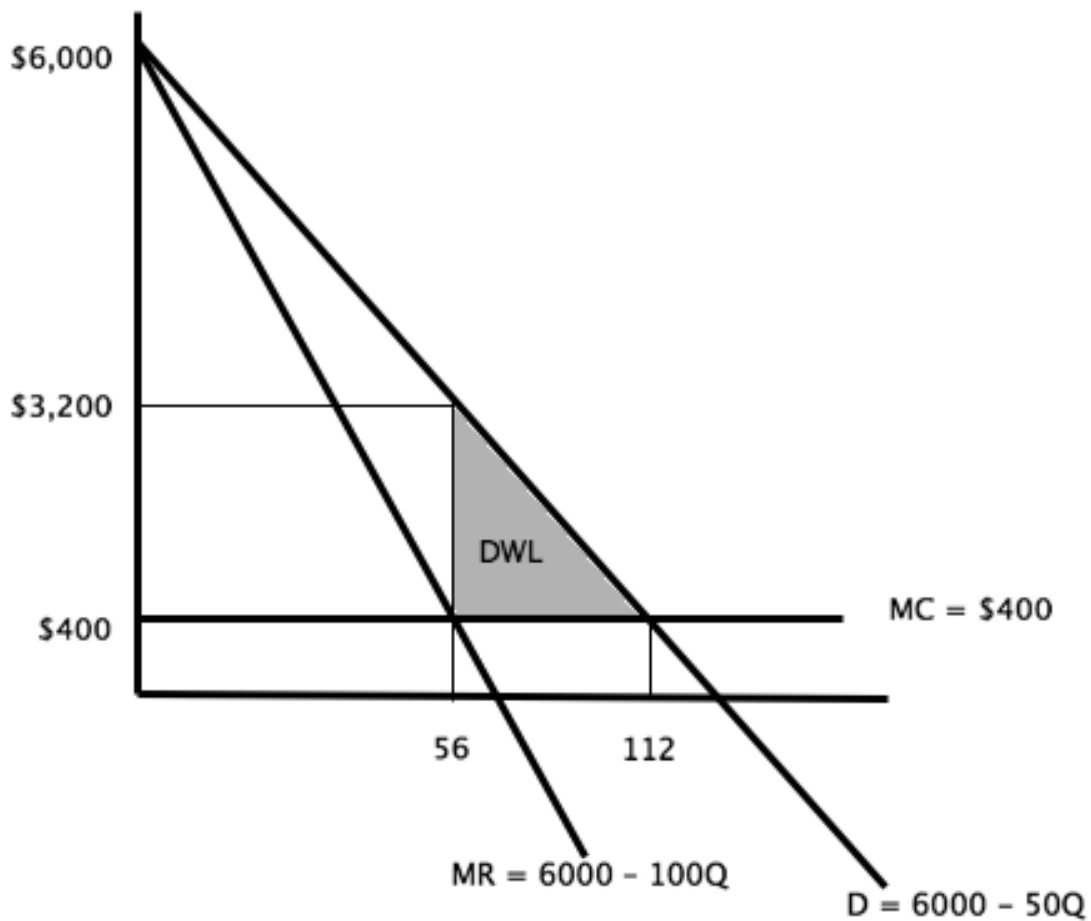   6,000 – 50Q = 400
   5,600 = 50Q
   Q = 112

19. 78,400

   DWL is the area where we have producer or consumer surplus under perfect competition; however, we have neither producer or consumer surplus under monopoly.

   DWL = (1/2)(112 – 56)(3200 – 400)
   DWL = 78,400

20. No

What will Firm #1 do if Firm #2 chooses left? Select bottom because 20 > 16.

Firm #2

		Left		Right
Firm #1	Top	16	28	
	Bottom	20	16	

What will Firm #1 do if Firm #2 chooses right? Select top because 32 > 28.

Firm #2

		Left	Right	
Firm #1	Top		32	36
	Bottom		28	24

Firm #1 does not have a dominant strategy. Firm #1 will go bottom if Firm #2 goes left; however, Firm #1 will go top if Firm #2 goes right.

21. Yes, Right

What will Firm #2 do if Firm #1 chooses top? Select right because 36 > 28.

Firm #2

		Left		Right	
Firm #1	Top	16	28	32	36
	Bottom	⬛	⬛	⬛	⬛

What will Firm #2 do if Firm #1 chooses bottom? Select right because 24 > 16.

Firm #2

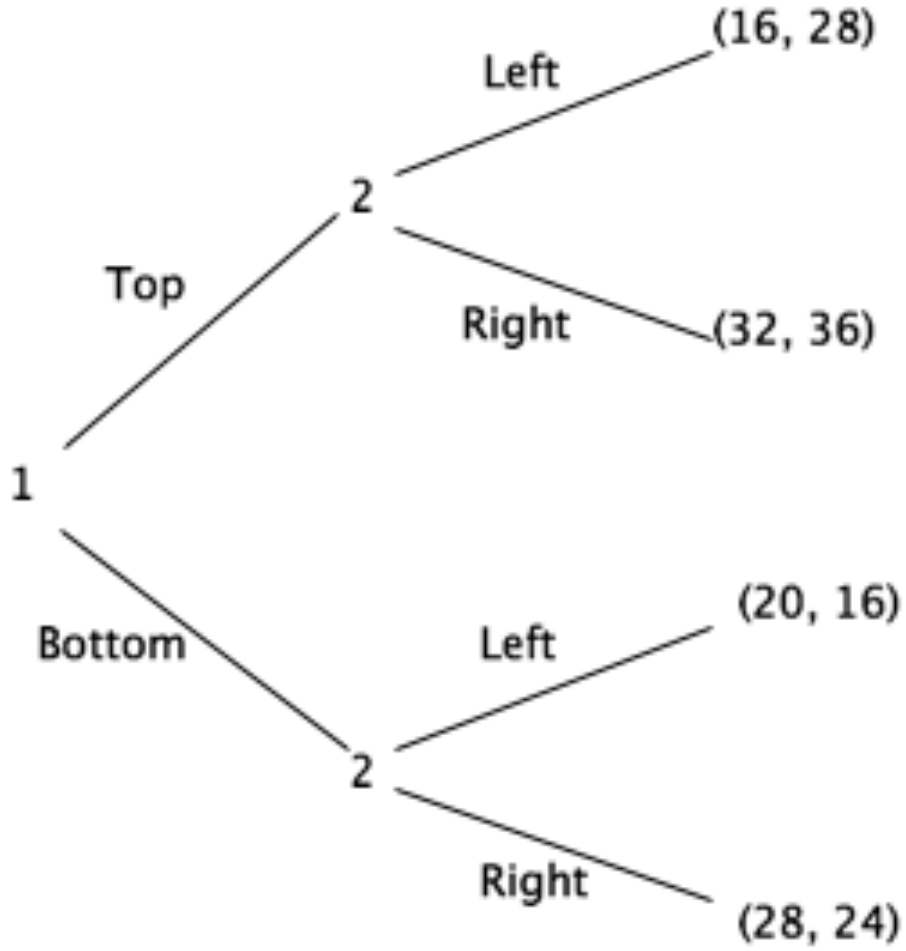|		Left		Right	
Firm #1	Top	⬛	⬛	⬛	⬛
	Bottom	20	16	28	24

Firm #2 has a dominate strategy to select right. Firm #2 will choose right when Firm #1 chooses top or bottom.
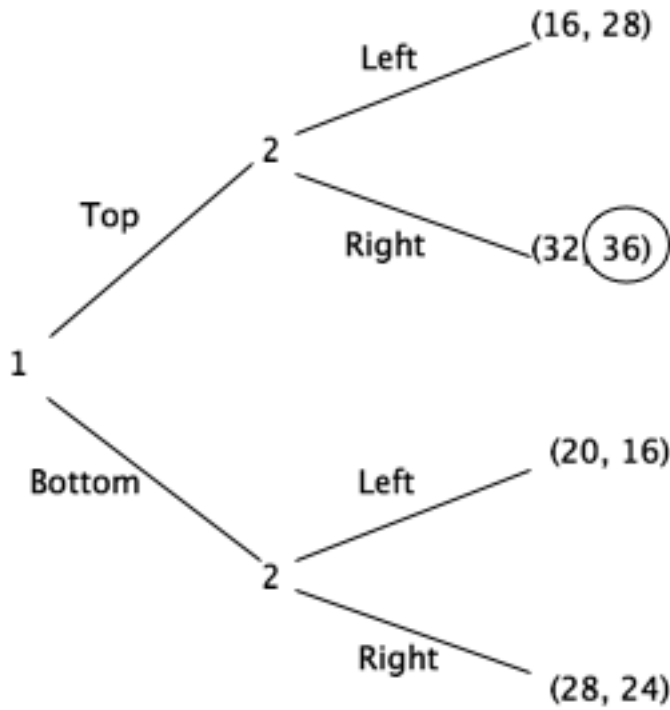
22. Top-Right

Firm #2

		Left		Right	
Firm #1	Top	16	28	32	36
	Bottom	20	16	28	24

23. Top-Right
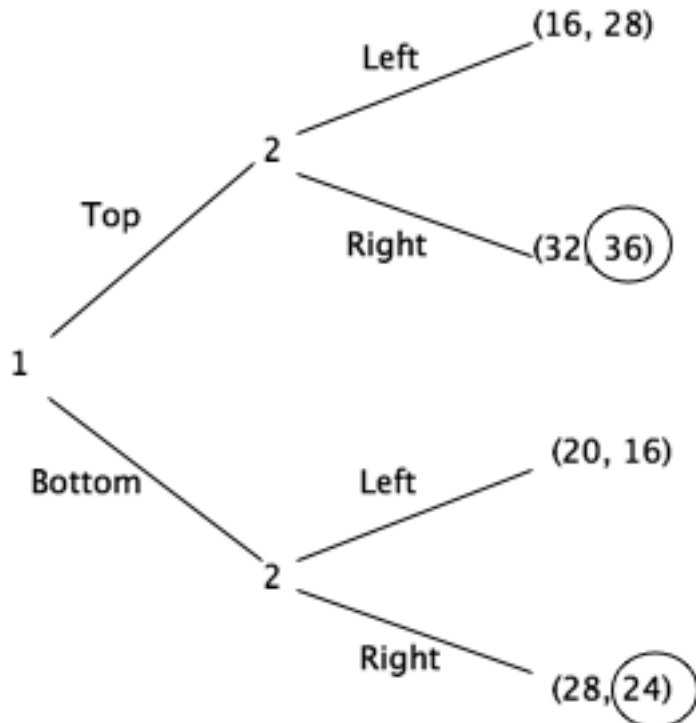
   First, you need to turn the table into a decision tree where Firm #1 goes first.

                                                    Left   (16, 28)

                                              2

                              Top   Right   (32, 36)

              1

                              Bottom   Left   (20, 16)

                                              2

                                                    Right
                                                                (28, 24)
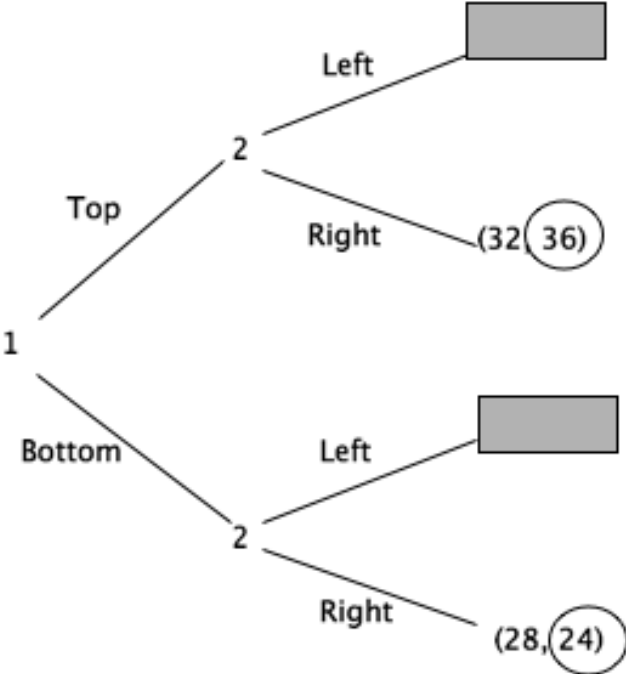
What will Firm #2 do if Firm #1 selects top? Firm #2 will select right because 36 > 28.
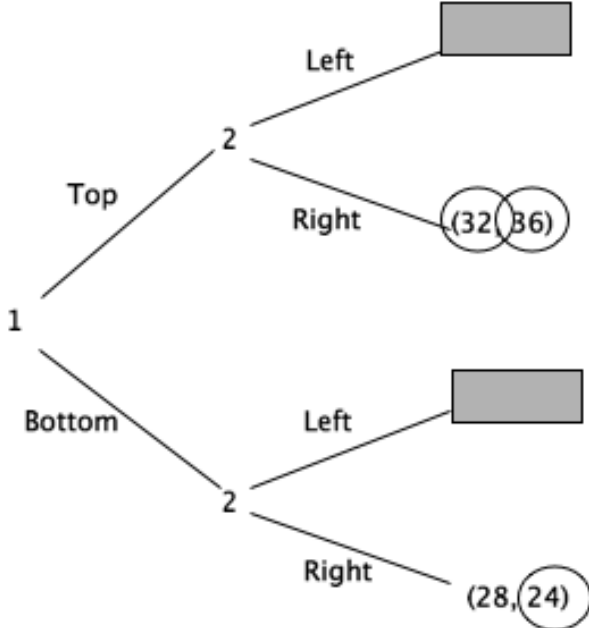

What will Firm #2 do if Firm #1 select bottom? Firm #2 will select right because 24 > 16.

Firm #1 knows that Firm #2 will always select right – This means that top-left and bottom-left are not possible options for Firm #1.

Firm #1 will select top because 32 > 28 – Firm #1 selects the highest payoff based on the knowledge that top-left and bottom-left are not possible outcomes.

24.   .2 x 10 = 2

                .4 x 20 = 8

                .4 x 200 = 80

                EV = 90 utils