Trade-Tariffs Answer Keys:

Chapter 7

Section 1

1a. large
1b. small
1c. perfect substitutability in consumption
1d. partial equilibrium

Section 2

1a. the free trade price
1b. lower than
1c. higher than
1d. zero
1e. import demand
1f. export supply
1g. a horizontal line

Section 3

1a. consumer surplus
1b. producer surplus
1c. increase
1d. increase
1e. increase
1f. increase

2a. = (1/2)600(50-20) = $9,000
2b. = -[500(5) +(1/2)(100)(5)] = - $2,750 , or, (1/2)(25)(500) – 9000 = - $2,750.

3a. (1/2)(20)(600) = $6,000
3b. -[450(5) + (1/2)(150)(5)] = - $2,625 , or, (1/2)(15)(450) – 6000 = - $2,625

Section 4

1a. monopsony power in trade
1b. increase
1c. decrease
1d. prohibitive
1e. increase
1f. $4
1g. decrease
1h. decrease

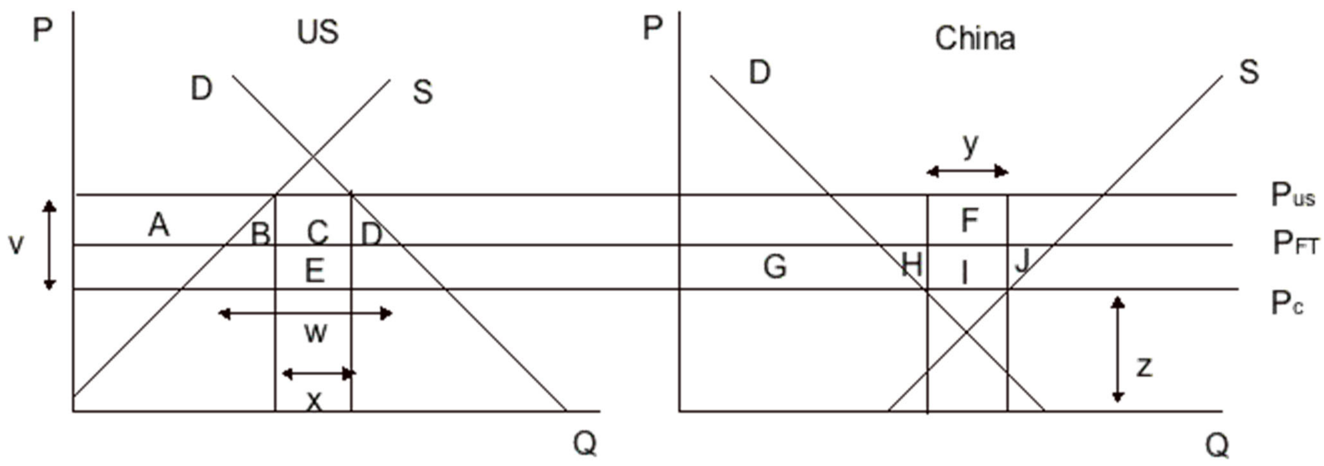
2a. the price in the importing country with the tariff in place
2b. export supply, …. in the export market with the foreign tariff in place

Section 5
1a. tariff revenue
1b. decrease
1c. increase
1d. increase
1e. increase
1f. decrease
1g. decrease
1h. larger
1i. smaller

2.

	I Import Tariff by a Large Country - initial tariff is zero	II Import Tariff Reduction by a Large Country
Domestic Market Price	+	-
Domestic Industry Employment	+	-
Domestic Consumer Welfare	-	+
Domestic Producer Welfare	+	-
Domestic Government Revenue	+	A
Domestic National Welfare	A	A
Foreign Price	-	+
Foreign Consumer Welfare	+	-
Foreign Producer Welfare	-	+
Foreign National Welfare	-	+

3.



A. Which country is the exporter of the product?	China
B. Where on the graph is the level of imports depicted with the tariff in place?	X
C. Which areas on the graph represent the change in consumer surplus for the importing country if the tariff is removed? (include the sign)	+(A + B + C + D)
D. Which areas represent the tariff revenue lost by the importing government?	+(C + E)
E. Which areas represent the net national welfare effect from the tariff elimination by the importing country?	(B + D - E)
F. Which areas represent the net national welfare effect from the tariff elimination in the exporting country?	+(H + I + J)
G. Which areas represent the world welfare effects from the tariff elimination?	(H + J + B + D)

Section 6

1a. optimal tariff
1b. maximum revenue tariff
1c. zero
1d. prohibitive tariff
1e. higher
1f. higher
1g. lower
1h. lower
1i. higher

Section 7

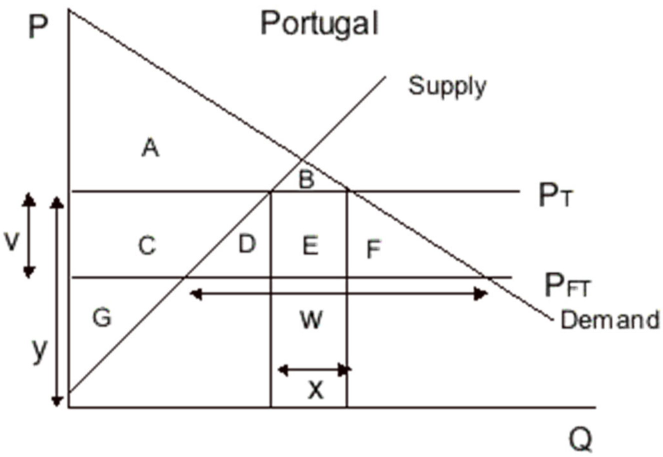
1a. $4
1b. $100
1c. stay the same
1d. decrease
1e. decrease

Section 8

1.

	Import Tariff Reduction by a Small Country
Domestic Market Price	-
Domestic Industry Employment	-
Domestic Consumer Welfare	+
Domestic Producer Welfare	-
Domestic Government Revenue	A
Domestic National Welfare	+
Foreign Price	0
Foreign Consumer Welfare	0
Foreign Producer Welfare	0
Foreign National Welfare	0

2.



A. Where on the graph is the level of imports in free trade?	W
B. Which area(s) represent the *level* of consumer surplus in free trade?	+(A + B + C + D + E + F)
C. Which area(s) represent the *level* of producer surplus in free trade?	+ G
D. Where on the graph is the size of the tariff depicted?	v
E. Where on the graph is the level of imports after the tariff depicted?	x
F. Which area(s) represent the tariff revenue collected by the importing government with the tariff in place?	+ E
G. Which area(s) represent the change (+/-) in consumer surplus when the tariff is applied?	- C – D – E - F
H. Which area(s) represent the change (+/-) in producer surplus when the tariff is applied?	+ C
I. Which area(s) represent the change (+/-) in national welfare when the tariff is applied?	- D - F
J. Which area(s) represent the efficiency losses that arise with the tariff?	- D – F

7.9
1a. retaliation
1b. a Nash equilibrium
1c. the cooperative solution

2.

		Ethiopia	
	(Kenya, Ethiopia)	Free Trade	15% Tariff
Kenya	Free Trade	(100,100)	(100, 80)
	15% Tariff	**(80, 100)**	**(80, 80)**

2a. The original numbers in the Table reflect the results from a small country case so that a 15% tariff by Ethiopia will reduce its own national welfare (100 to 80) but will not affect its trading partner, Kenya (100 to 100). Assuming symmetry, when Kenya puts 15% tariffs in place independently, its welfare falls (100 to 80) while Ethiopia's remains constant (100 to 100). This gives us the southwest box. Finally if Ethiopia put its own 15% tariffs on top of Kenya's 15% tariffs, then Ethiopia's welfare will fall (100 to 80) but Kenya's would remain the same (80 to 80). This gives the southeast box.

2b. The non-cooperative, or Nash, equilibrium is found with the following procedure.

1) First, suppose Ethiopia chose 15% tariffs, what is Kenya's best response? Answer: Free trade, since 100 > 80

2) Now suppose Kenya chose free trade, what is Ethiopia's best response? Answer: Free trade since 100 > 80.

3) Finally, suppose Ethiopia chose free trade, what is Kenya's best response? Answer: free trade, again since 100 > 80.

4) If Kenya chooses free trade, Ethiopia chooses free trade, AND if Ethiopia chooses free trade, Kenya chooses free trade. Thus, (free trade, free trade) is the Nash Equilibrium.

2c. The cooperative equilibrium is the one that maximizes the sum of the welfare for the two players. This occurs at (free trade, free trade) or (100, 100) with the sum of welfare at 200.

2d. NO. If countries played this game there is no need for an organization like the WTO to promote cooperation since the cooperative outcome is the same as the non-cooperative outcome.

3a.

		Costa Rica		
	(US, CR)	Free Trade	10% tariffs	20% tariffs
US	Free Trade	(100, 20)	(100, 19)	(100, 18)
	Optimal Tariffs	(101, 18)	**(101, 17)**	**(101, 16)**
	20% tariffs (> optimal)	(100, 17)	**(100, 16)**	**(100, 15)**

3b. (free trade, free trade) or (100, 20)

3c. Anything on the Optimal tariff row (101, 18) (101, 17) or (101, 16)

3d. (Optimal tariffs, Free trade) or (101, 18)

3e. (free trade, free trade) or (100, 20)

4.a

		EU	
	(US, EU)	Free Trade	Optimal Tariff
US	Free Trade	(50,50)	(40, 55)
	Optimal Tariff	**(55, 40)**	**(45, 45)**

4b. US (opt tariff, free trade) or (55,40) EU (free trade, optimal tariff) or (40,55)

4c. (opt tariffs, opt tariffs) or (45, 45)

4d. (free trade, free trade) or (50, 50)

4e. Yes.